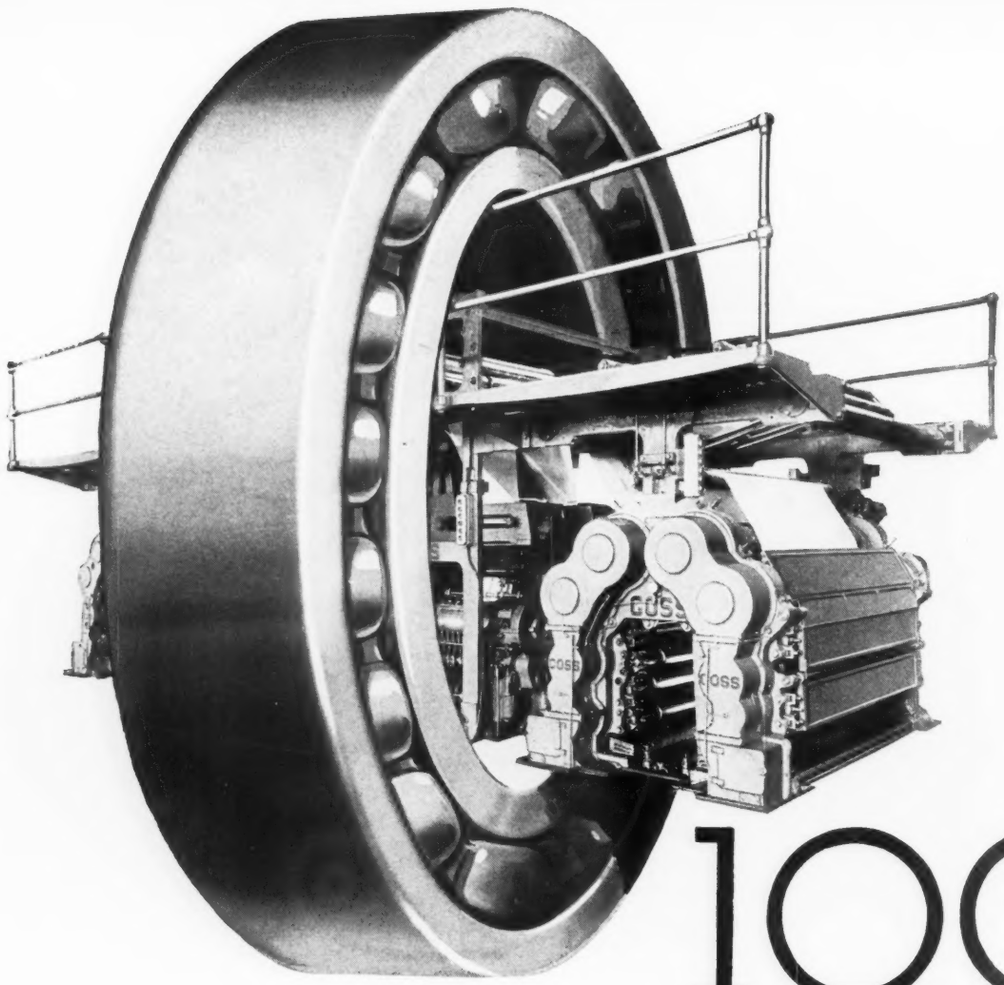
PRINTING EQUIPMENT ENGINEER

SEPTEMBER • 1934

A TECHNICAL PUBLICATION FOR MECHANICAL EXECUTIVES RESPONSIBLE FOR PRINTING PRODUCTION, EQUIPMENT AND SUPPLIES IN THE COMMERCIAL, MAGAZINE, PRIVATE PLANT AND DAILY NEWSPAPER FIELDS



100%
EQUIPPED WITH ANTI-FRICTION BEARINGS

GOSS High Speed Anti-Friction Press Insures Highest Net Production at Low Cost

114 Ball and Roller Bearings on each unit and intermediate folder—cylinders mounted in pre-loaded Timken bearings—new precision methods of manufacturing and measuring sizes to 1/10000 of an inch. . .

It's features like these that insure better printing at greater speeds, fewer web breaks, and substantial savings in power and upkeep with the Goss High Speed Anti-Friction Press.

The smooth, perfectly balanced performance of this Goss Press will show a remarkable record of economy over a long period of time. And all along, it will creditably reflect its precision and accuracy in quality printing results.

With only ordinary attention and occasional lubrication, the Goss High Speed Anti-Friction Press will defer obsolescence for many years to come.

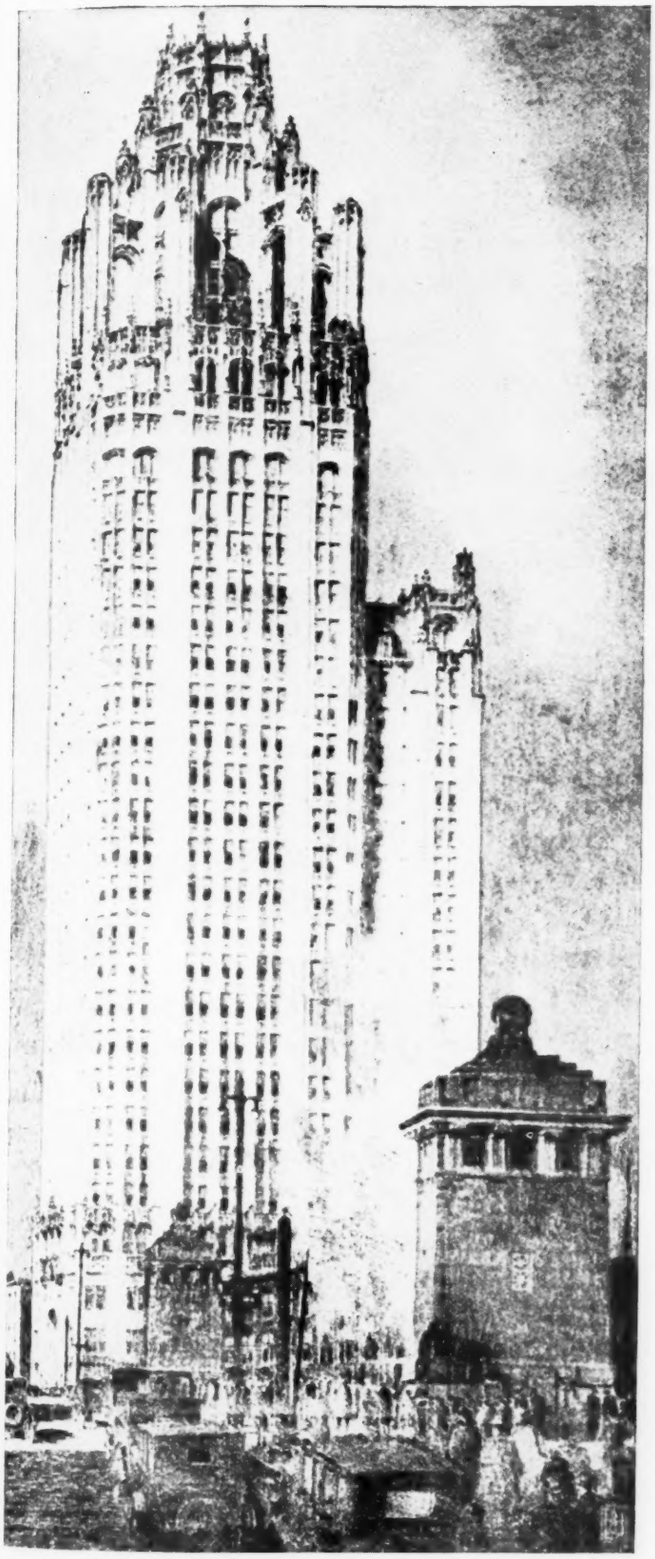
Study the advanced improvements of the Goss Press point by point—compare—get all the facts and details. Write at once!

GOSS

THE GOSS PRINTING PRESS COMPANY, CHICAGO, ILLINOIS • New York Office: 220 East Forty-Second St. • San Francisco Office: 707 Call Building • The Goss Printing Press Company of England, Ltd. • London, England

GONE THE WAY OF YESTERDAY

The Chicago Daily Tribune Is Now Producing Dry Mats in



58 SECONDS

With the STAHI AUTOFORMER, and with better Casting Levels, than were effected with earlier models of The Stahi Metropolitan Formers and secondary scorchers of another make; which required

2 MINUTES

This illustrates the amazing progress STAHI has made with its dry-mat Forming Machinery. . . A saving of

1 MINUTE AND 2 SECONDS

Per mat . . . and BETTER MATS . . . Automatic Operation, heat on both sides of the mat, positive Variable Voltage Heat Control, Electric Timing, and Better Vacuum Control, are the CARDINAL FEATURES of The AUTOFORMER . . . which makes possible this INCOMPARABLE NEW PERFORMANCE.

If you are using PRIMITIVE SCORCHERS, you are NOT obtaining Uniform Casting and Printing Levels, and VALUABLE PRODUCTION TIME IS BEING WASTED.

STAHI NEWSPAPER SUPPLY CO., INC.

Los Angeles, Calif. Portland, Oregon

●

AGENCIES

THE GOSS PRINTING PRESS CO., Chicago, Illinois

WOOD FLONG CORPORATION, Hoosick Falls, N. Y.

CERTIFIED DRY MAT CORPORATION
342 Madison Avenue, New York City, N. Y.

TORONTO TYPE FOUNDRY CO., Toronto, Canada

●

SOUTH AMERICAN AGENTS

A. M. CARNEIRO & CO., 152 W. 42nd Street, New York City, N. Y.

●

EUROPEAN MANUFACTURERS

THE GOSS PRINTING PRESS COMPANY OF LONDON, ENGLAND

"GOODYEAR BLANKETS can 'TAKE IT'!"

IN THESE words one of America's best known publishers expresses the printing craft's opinion of Goodyear Red Top Felt Blankets.

In plant after plant these press-proved blankets have solved and eliminated many technical problems. They are 100% equipment on many of the nation's leading newspapers.

Here are some of the reasons:

Do not bolster
Hold their gauge
Give even impressions
Snug the cylinder
Highly oil-resistant
Not marred by leader marks
No cracking or peeling

But most important of all is *economy*. Records of 24,000,000 to 30,000,000 impressions are not uncommon—at one-third to one-half the cost of ordinary blankets.

NOW YOUR PRESSES CAN BE EQUIPPED COMPLETELY WITH GOODYEAR PRODUCTS

Equip a press with these blankets and discover for yourself how much better printing they do at lower cost. For further information, drop a line to Goodyear, Akron, Ohio, or Los Angeles, California. Branches in all principal cities.

THE GREATEST NAME IN RUBBER

NRA CODE

GOODYEAR

Associate Member

National Printing Equipment Association, Inc.

A Technical Publication for Mechanical Executives Responsible for Printing Production, Equipment and Supplies in the Commercial, Magazine, Private Plant and Daily Newspaper Fields.

Published by
DON WILL

Edited by
MAC SINCLAIR

ESTABLISHED 1910

PUBLISHED MONTHLY
AT
1370 ONTARIO STREET
CLEVELAND, OHIO

CCA
Member Controlled Circulation Audit

Western Representative: H. D. Aylsworth, 121 North Clark St., Chicago, Ill. Phone: State 3800.

Copyright 1934 by Willsea Publishing Co., Trademark Registered U. S. Patent Office; Single copy $.25; subscription price, $2.00 per year, in advance. Subscription rates for Canada and Foreign Countries on application. *Printing* EQUIPMENT *Engineer* is fully protected by copyright and nothing that appears in it may be reproduced either wholly or in part without permission.

Printing EQUIPMENT Engineer

Trade Mark Registered U. S. Patent Office

Volume 48 *Number 6*

September 1934 Contents

PAGE

FIFTH CONFERENCE, PRINTING INDUSTRIES DIVISION - - - - - 7

AUTOMATIC TALC APPLICATOR FOR RUBBER ROLLER POLISHING - 8

CRAFTSMEN HAVE SUCCESSFUL MEET IN TORONTO - - - - - 9
John E. Cobb

NEW MECHANISMS FOR THE MONTH - - - - - - - - - 10
Staff Writer

LETTERS TO THE EDITOR - - - - - - - - - - - 12
Impression Pete

MIXING COLORED PRINTING INKS - - - - - - - - - 13
Robert F. Salade

HENDERSON LUDLOW MATRIX STICK - - - - - - - - 16

PATENTS FOR ALL BRANCHES - - - - - - - - - - 22

EQUIPMENT AND TECHNICAL LITERATURE - - - - - - - 32

ADVERTISER'S INDEX - - - - - - - - - - - - 33

Share Your Knowledge With Others

The key men in your organization will appreciate looking over the pages of this magazine. Perhaps one of them will be able to put some particular technical idea to good use.

Place a check mark in each square for attention of the department head or assistant whom you wish to look over special articles in this issue.

☐ *Production Manager*

☐ *Foreman Lithographing Department*

☐ *Mechanical Superintendent*

☐ *Superintendent Stereotype Foundry*

☐ *Composing Room Superintendent*

☐ *Superintendent Electrotype Department*

☐ *Superintendent Press Room*

☐ *Chief Composing Room Machinist*

☐ *Bindery Foreman*

☐ *Monotype Department*

☐ *Manager*

☐ *Photo Engraving Department*

☐ *Purchasing Agent*

WHAT IS THE Black and White Matrix?

IT IS ANY NEW OR USED LINECASTING MACHINE MATRIX TO WHICH THE PATENTED BLACK AND WHITE PROCESS HAS BEEN APPLIED

Why apply this process?-The process is applied so that matrices can be identified at a glance.

What are the advantages of easy identification?-With Black and White Matrices operators can easily catch errors in the assembler while they are composing lines. Operators also can make positive verification of corrections before the lines are cast.

Does this save many errors in original setting?-At least 33% of all errors previously marked by proofreaders are eliminated by the use of Black and White Matrices. A 25% saving is guaranteed.

What does this mean in dollars and cents?-For the average plant it means a saving of more than 4% of all operator time in addition to the large saving in the time of proofreaders and floor men in detecting errors, placing corrections, and pulling revise proofs.

Any other questions will be cheerfully answered by

MATRIX CONTRAST CORPORATION

EMPIRE STATE BUILDING, NEW YORK

SOLE LICENSEES OF THE PERCY L. HILL BLACK AND WHITE PATENTS.

Printing
EQUIPMENT
Engineer

for September 1934

Fifth Conference

(PRINTING INDUSTRIES DIVISION A. S. M. E.)

THE fifth conference of the Technical Experts in the Printing Industry will be held at Hotel Benjamin Franklin, Philadelphia, October 8 and 9. All local printing organizations are cooperating in every way to make the meeting a successful one from every standpoint.

At the Chicago Conference held in June of last year announcement was made of tentative plans for the organization of a Printing Research Institute to be sponsored by the A. S. M. E. Printing Industries Division. It is expected that plans for the Institute will be complete at the Philadelphia meeting and organization will be made. It is expected to take in all those actively interested in aiding printing research.

RESEARCH INSTITUTE

A. C. Jewett, of the Carnegie Institute of Technology is developing the plan of the Institute. It is planned to have all out-of-town delegates attending the Conference pay a registration fee of $2.00 which will be a subscription membership to the Institute for one year and will include a copy of the Proceedings for the Fifth Conference. There has been considerable talk since the first Conference, held four years ago at the Carnegie Institute of Technology, on the need of organizing a printing research group, but due to business conditions it seemed inadvisable to initiate it until now. The British delegation attending the first conference returned to England and formed an Institute there that has been doing interesting and useful work for several years. It has been decided that the new Institute will start its activity as a clearing house for printing research information until such time as conditions warrant actively financing of printing research work.

THOSE PREPARING THE PROGRAM

Authors have been selected for these papers which are now in the process of preparation, also the discussors have been selected from the various aspects of these subjects. The technical program has been developed primarily by Lewis Trayser, Asst. Supt., Curtis Publishing Company, and those who have assisted in securing authors are: Joseph S. Pecker, V. Winfield Challenger, W. A. Meeks, John Clyde Oswald, Edward Epstean, Wm. C. Glass, Jos. M. Farrell, Burt D. Stevens, R. G. Macdonald and Edward P. Hulse.

EXHIBITS TO BE MADE

Mr. Trayser announced that exhibits to be approved by the program committee on machinery and processes covered

OFFICERS OF PRINTING INDUSTRIES DIVISION

EXECUTIVE COMMITTEE 1934

John Clyde Oswald, *Chairman*, 461 Eighth Avenue, New York, N. Y.
Edward Pierce Hulse, *Secretary*, 29 West 39th Street, New York, N. Y.
William C. Glass.
Edward Epstean
Joseph M. Farrell
Burt D. Stevens

ADVISORY ASSOCIATES

George H. Carter
Thomas R. Jones
Fred S. English
Ronald G. Macdonald
Harry L. Gage
Summerfield Eney, Jr.
George C. Van Vechten
Wells F. Harvey

DIVISIONAL COMMITTEES

Meetings and Programs—Edward Epstean, *Chairman.*
Research and Survey—Arthur C. Jewett, *Chairman.*
Progress Report—Winfield S. Huson, *Chairman.*
Paper and Pulp—William R. Maull, *Chairman.*

by the program topics will be shown in the rooms of the Ben Franklin Hotel during the meeting. Other special events such as plant inspection trips and inspection of the Franklin Institute are being planned.

FIRST DAY (October 8th)

9:00 a. m. Registration at Benjamin Franklin Hotel.

10:00 a. m. Inspection trip through The Curtis Publishing Company plant.

1:00 p. m. Luncheon at the Benjamin Franklin Hotel. Walter D. Fuller, First Vice-President, The Curtis Publishing Company, presiding.
The Photomechanics of Color Photography by Harry Groesbeck, Jr., Art Director, Country Life-American Home Corp.
Discussion.

AFTERNOON SESSION

3:00 p. m. *Synthetic Resins as a Process Roller Material* by A. L. Freelander, Vice-President of the Dayton Rubber Mfg. Co.
Discussion.

4:00 p. m. *Rubber and Composition Plates* by Homer J. Winkler, Ace Electro Co., Cleveland, Ohio.
Discussion.

5:00 p. m. *Quick Drying Inks.*

6:15 p. m. *Informal Dinner* at the Benjamin Franklin Hotel.

EVENING SESSION

8:30 p. m. Mr. V. Winfield Challenger, presiding: Secretary, The Philadelphia Club of Printing House Craftsmen.
New Developments in Offset Printing by Burt D. Stevens, Miehle Printing Press & Mfg. Co.
Discussion.
Photomechanical Reproduction of Offset Plates by W. C. Huebner, Huebner Laboratories.
Discussion.

SECOND DAY (October 9)

MORNING SESSION

9:30 a. m. Exhibition of Type Design by Sol Hess, Lanston Monotype Machine Co.
Discussion

10:30 a. m. Inspection trip through the Lanston Monotype Plant, and buffet luncheon there at 12 o'clock noon.

AFTERNOON SESSION

Meetings at the Franklin Institute, John Clyde Oswald, presiding.

1:30 p. m. *New Developments in Color Rotogravure Printing* by G. A. Fries, *The News*, New York.
Discussion.

2:30 p. m. *Printing of Metal Paper* by R. E. Hunt, Reynolds Metal Company.
Discussion.

3:30 p. m. *Aquatone Process* by Maurice Weyl, Edward Stern Co.
Discussion.

4:30 p. m. Organizing Printing Research Institute by Dr. Arthur C. Jewett.

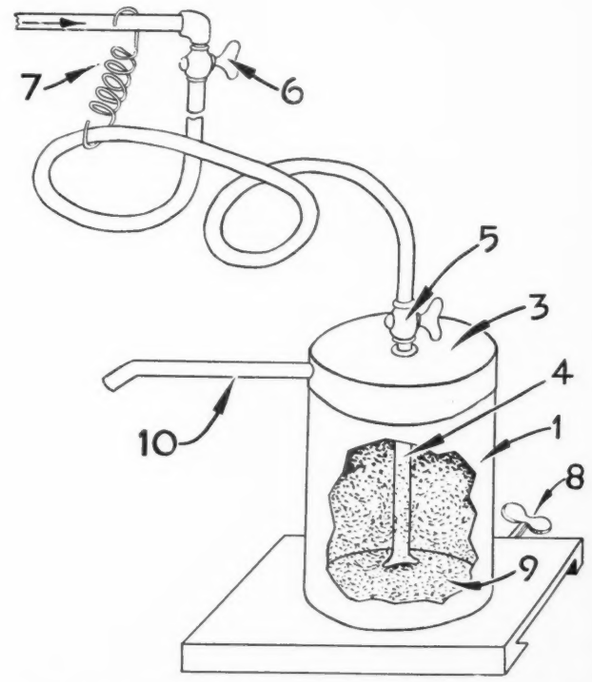
Automatic Talc Applicator For Rubber Roller Polishing

H. J. Graham, superintendent of maintenance, Cleveland *Plain Dealer*, recently described to the writer an automatic talc applicator which is used on a rubber roller grinding lathe. The applicator was devised by John Olsen, a *Plain Dealer* maintenance machinist and was constructed from materials to be found in the average daily newspaper plant machine shop. The applicator, through the use of compressed air, blows the talc or French chalk evenly against the roller for the return cut of the polishing cloth, or may be adjusted to deposit the talc immediately between the polishing cloth and the rubber roller. A vacuum exhaust or dust collector arrangement draws off most of the talc which, upon striking, does not adhere to the roller.

The device consists of a container as shown in the drawing, mounted upon a flat base which adapted to fit the tool carriage way of the grinding lathe. It is held in position by a wing nut *8* turned up by hand.

In actual operation, the applicator chamber *1* is partially filled with talc. Compressed air is turned on at the supply pipe by means of a ⅜-in. valve *6*. The air passes through a rubber hose connected to a ¼-in valve *5* in the top of the container body and into the ⅛-inch pipe *4*. The pipe *4* is flattened into a bell-shape at its lower end and carries a 1/16-in. slot. As the air enters the chamber from the pipe, it acts like a spray to aereate the talc. The mixture of air and talc is emitted from the nozzle *10* more or less according to air pressure permitted by valve *5*.

The cap *3* is rotatable so nozzle *10* will apply the talc at any particular point on the roller.



Drawing of a printing press rubber roller applicator or duster which can be used to apply talc or French chalk to a rubber roller while receiving its finishing cut.

The container 1 is made from a piece of 4-in. steel pipe approximately 8½ in. high. A bottom 9 was affixed by welding a piece of steel in one end of the container 1. A cap 3 was turned out on a lathe and screws to the top of the container body 1. A 5 16-in. brass spout or nozzle, 5 in. long, shown at 10, screws into the edge of cap 3. A piece of ¼-in. pipe 4 is screwed centrally into the cap and extends nearly to the bottom of the container at 9. The pipe 4 is bell-shaped and is flattened at the bottom in order to spread the air jet and aereate the talc in the container body so that when it is emitted from the nozzle 10 it will contact the roller in a spray-like form.

The container 1 is fastened to base 2 by means of two ¼-20 flat-head screws. It will be noticed that the base is slotted to correspond with the top way of the tool carriage. A ¼-20 thumb screw 8 holds the applicator in place as adjusted in relation to the rubber roller.

The rubber hose is of sufficient length to follow travel of the carriage the full length of a rubber roller and the slack is taken up by extension coil spring *7* which is 1½ in. diam.

The *Plain Dealer* lathe is equipped with a means for automatically holding the polishing cloth in contact with the rubber roller, which was fully described in the May, 1931, *Printing* EQUIPMENT *Engineer*.

Retires From Ink Field

Officials of the L. Martin Company, branch of the Columbian Carbon Company, announce that it has retired from the manufacture of printing ink as of September 1, and will now devote its entire time and efforts to the production of black pigments for the printing ink and other industries.

Craftsmen Have Successful Meet In Toronto

By JOHN E. COBB*

THE four days of the Fifteenth Annual Convention of the International Association of Printing House Craftsmen, were crowded off the calendar all too swiftly. During these days (August 26, 27, 28 and 29) delegates from thirty-four clubs assembled to deliberate upon constructive legislation, clear up business routine, prepare the way for advancement in 1935; attend gatherings at the entertainment functions, in lounge rooms, lobby, hotel rooms and over the luncheon tables—all in the spirit of good fellowship.

OPENING FORMALITIES IMPRESSIVE

The convention was called to order by Jules Boettger, president of the Toronto Club. The assembled Craftsmen sang the Canadian and American National Anthems, which was followed by the Invocation. His Worship, Wm. J. Stewart, Mayor of Toronto, gave a cordial address of welcome, speaking of the unity of purpose of the two nations, in striving to cope with the problems of economic happiness. He stressed the thought that it was a real pleasure to welcome a group of men who belonged to an organization of builders, in this day when many seemed determined to tear down that which others have builded.

Past International President Oliver Watson, Toronto, gave the address of welcome from the host club.

Response to these cordial welcomes was ably made by First Vice President John B. Curry, of Boston.

BUSINESS SESSIONS

All the sessions were well attended, and the president and all speakers were accorded the full attention of those present. The routine matters of the Association were disposed of with businesslike precision by the capable presiding of President Cordis.

John B. Curry, First Vice President

REPORTS EVIDENCE STABILITY

The report of the President was the only one read before the convention. Without fear of contradiction, we state that it was the most constructive president's report ever read before a Craftsmen's Convention. President Cordis is a man of vision, looking into the future possibilities of the Craftsman organization, a dynamic character, completely wrapped up in the building of a larger organization with tangible purposes that as yet have not been fully realized.

Clark R. Long, Second Vice President

All reports evidenced a successful year, taking conditions into consideration. The Selective Membership Campaign brought several hundred new members into the organization.

The reports of the Secretary and Treasurer were in the usual businesslike form and showed that the administration had conserved the funds of the Association, and still had carried out the work of a growing organization.

CONSTRUCTIVE LEGISLATION

The work of the Constitution and By-Laws Committee; under the chairmanship of Craftsman A. V. Fitzgerald, Milwaukee-Racine Club; the Committee on Officers' Reports, guided in its deliberations by J. Gus Liebenow, Newark Club; and the Committee on Resolutions, Phil McAteer of Boston, presiding, put in many hours of strenuous work to complete the many points and problems of association legislation. The result of the deliberations of these important committees, will be of vital interest to every member, and the industry at large.

Thos. E. Cordis of San Francisco, was re-elected president of the International Association of Printing House Craftsmen, so that with the other officers the program of advancement could be continued.

L. M. Augustine, Secretary

TORONTO CLUB CONDUCTS MEETING

The Monday afternoon session was conducted as the regular monthly meeting of the Toronto Club. Regular orders of business was conducted with initiation of new members, entertainment features, and technical educational hour, which included papers on Rubber Printing Plates, Aniline Printing, and The Use of Celluloid Plates. An interesting sketch or triolog entitled "It's the Weather," was presented by three

Continued on page 18

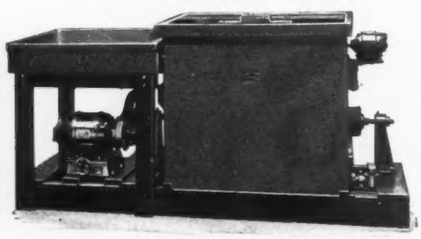
*Racine, Wis., Secretary, Milwaukee-Racine Club of Printing House Craftsmen.

New Mechanisms For the Month

Etching Machine, Automatic Press Roller Gauge, Precision Proof Press and Other Equipment Described Here

By STAFF WRITER

Rotospray Etching Machine



It has been announced that the United States Stoneware Co., 50 Church St., New York, New York, has incorporated new features in the Rotospray Etching Machine for photoengravers. These improvements consist of (1) double expansion chambers at each paddle shaft to prevent any acid seepage even when excess acid is put into the etching tank; (2) acid-proofed steel base frame; (3) rubber-coated metal cover plate, and (4) strengthening ribs have been added around all inside walls of the etching tank.

The Rotospray is made in three sizes as follows: No. 1, plate 20 in. by 20 in., overall dimensions (including stand), 63 in. by 24 in. by 36 in.; No. 2, plate 23 in. by 27 in., overall dimensions (including stand), 75 in. by 27 in. by 37½ in.; No. 3, plate 24 in. by 32 in., overall dimensions (including stand), 84 in. by 28 in. by 39½ in. It is claimed by the manufacturers that the large number of paddle brackets disposed sinesoidally about the motor-driven shaft results in a more uniform dispersion of the etching solution at high pressure which makes possible a great range of etching effects. A zinc halftone may be etched in about 15 sec. and a copper halftone in 40 sec. to 60 sec. time.

The Rotospray is fitted with a variable speed drive and V-belt directly applied to the motor shaft, giving a variable paddle speed having a 3 to 1 speed range. The drive belt is protected from acid drippage due to its position under the wash tank.

The plate to be etched is leaned against integrally moulded supporting ribs. After spraying, the acid is made to flow backwardly rather than over the face of the plate. Besides reducing the danger of undercutting, these ribs make for greater ease in handling the plates. The plate rest can be set in each of two toe grooves.

For ventilating purposes, a high capacity fan with direct connected motor is provided. The drain outlet is placed in a protected position inside the main base frame.

Further particulars may be obtained by addressing the United States Stoneware Co., or *Printing* EQUIPMENT *Engineer.*

New Large Precision Proof Press

Vandercook & Sons, Inc., 900 North Kilpatrick Ave., Chicago, Ill., recently placed on the market what is claimed to be the largest precision proof press ever built. This Vandercook No. 226 Proving Machine takes a sheet 26 in. by 42 in. It is entirely power operated by means of a 1 h.p. motor for the impression cylinder and a 1/6 h.p. motor for ink distributing mechanism.

Thorough and continuous ink distribution is obtained through the use of three 3½-in. form rollers, two 2½-in. steel vibrators, two 3-in steel distributors and two motor driven ink drums. A third drum with automatic vibrating ductor roller acts as a fountain. The three form rollers may be instantly removed as a unit and another set substituted for a change of color as the press is suitable for color as well as black-and-white printing. Type matter may be printed and for this purpose a removable base is provided.

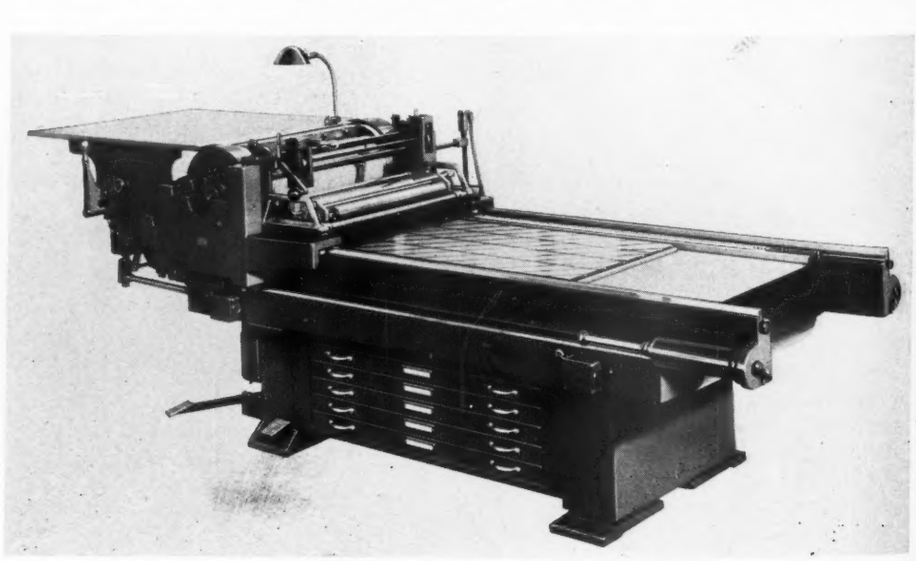
The speed of the forward or impression travel of the cylinder may be regulated. The cylinder returns to the feed board at a constant high speed. Air bumpers at both ends of the bed bring the cylinder to a quiet, jarless stop.

The No. 226 Vandercook has great impressional strength. Twelve preloaded alloy steel tie rods reinforce the heavy cylinder hangers. Construction throughout is exceptionally sturdy.

Micrometer front and side guides are provided. Adjustable sheet rollers engage the margins of the sheet to insure perfect register.

Miehle 41 Automatic Printing Press Unit

The Miehle Printing Press Co., 14th St. and So. Damen Ave., Chicago, Ill., announces a line of faster and more convenient printing presses. While these presses are distinctly new models, it is stated by company officials that the important and well-proved principles of Miehle presses have been retained. Among these new presses is a newly-designed completely automatic unit known as No. 41 Miehle Automatic



This is a picture of what is claimed to be the world's largest precision proof press. It is built by Vandercook & Sons, Inc., Chicago, Ill.

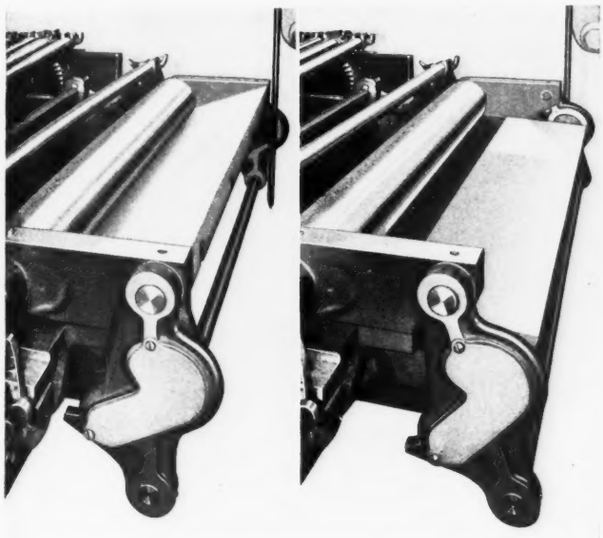
Unit. This press is built to take a standard 25 in. by 38 in. sheet. It will, however, handle sheets as large as 28 in. by 40½ in. and as small as 11 in. by 17 in. The practical speed for continuous operation is up to 3000 impressions per hour on paper stock suitable for machine feeding at high speed.

Embodied in the machine are a number of new features which save time both in makeready and running.

Roller bearings are used for the main drive shaft and bed motion rollers. The air heads which function to reverse the bed are of the piston ring type. The front end of the feed board is counterbalanced so that it can be raised easily for access to the cylinder for makeready.

There are four form rollers which cover the full form without reversing. Because of the high speed of this unit, non-meltable rollers are used. The ink fountain has been greatly improved so that the blade can be dropped readily from the roller for a clean, quick wash-up without disturbing the setting.

The delivery is of the roll-off type and for printed side up only. The delivery sticks are fitted with pulleys and narrow tapes. The front edge of the sheet is held positively by air suction as the delivery carriage travels toward the pile. When the carriage returns for the next sheet the suction rollers and



The ink fountain on the 41 Miehle Automatic Unit has been improved so that the blade can be dropped away from the roller for quick wash-up without disturbing the setting. At the left is shown the fountain in operating position. At the right the blade has been dropped for cleaning purposes.

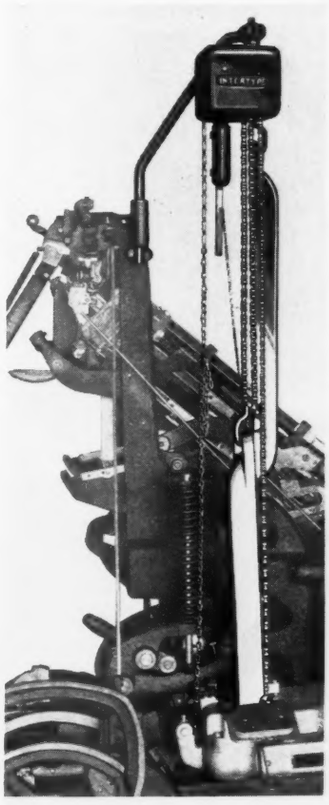
tapes rotate in the direction in which the sheet is traveling, rolling from under the sheet but retaining control until the sheet is dropped on the pile. The delivery, it is claimed, is especially well adapted for delivering light weight paper.

The feeder is of new design by the Dexter Folder Company, and, it is claimed, is fully capable of accurate feeding at high speed. It has four posts and is of the reloading type. There is ample space between the feeder and the press to allow the pressman to place the form on the type bed and work on it conveniently.

The reloading feature permits the stock to be piled in the feeder while the press is running. When one lift is run off, only a few seconds are required to remove the empty platform and raise the new pile to feeding height. The pile can be raised or lowered by motor power. There is a positive safety device provided to stop the elevator motor when the top of the pile reaches its maximum height. The front end of the feeder is counterbalanced with weights so that it can be lifted easily so that the press may then be hand-fed.

New Automatic Metal Feeder by Intertype

A new automatic metal feeder is offered by Intertype Corporation, 360 Furman St., Brooklyn, N. Y., or any one of its various agencies, so that owners of line-casting machines may increase the efficiency of their metal pots. This feeder can be mounted quickly on any line composing machine by means of a special adapter suited to fasten on the distributor bracket. The feeder, it is said, is supported on an arm which provides easy adjustment according to any needed requirements.

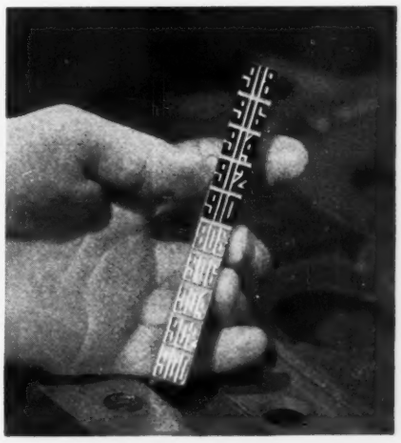


The feeder is of simple design and is positive in operation. It supports two pigs of metal. Metal is fed automatically into the pot at the same rate as it is used in casting slugs. The end of the active pig is immersed in the molten metal so that pre-heated metal is constantly being fed into the pot in small quantities. This results in minimum metal temperature fluctuations, maintains a constant metal level and assures better and more solid slugs in all sizes and lengths.

Further details may be obtained from the Intertype Coroation in Brooklyn or any of its agencies.

Roller Setting Gauge

Eugene Memmler, Box 697, Los Angeles, Calif., has announced a new gauge by means of which form rollers may be adjusted accurately on any flat bed cylinder press without removing the form from the press, in case it is necessary to



Picture shows one of the Memmler form roller gauges which has been inked by a roller set at 0.910 in.

make adjustments. The gauge is supplied in pairs. Each of the gauging blocks is identical. The upper or contact surface of each gauge is graduated by 0.002 in. steps from 0.009 in. to 0.918 in. at the high end of the gauge. If the clearance of one form roller is 0.906 in., the roller could not ink any of the steps 0.904 in. and below, but would ink the steps from 0.906 up to and including 0.918 in.

Continued on page 26

Letters To The Editor

65-Line vs. 75-Line Screen

The use of the 75-line screen as seen from the reproduction end of the process of producing a legible and artistically printed newspaper is open to argument.

From the aesthetic viewpoint the appearance of the 75-line screen is very, very good indeed. But how many of these 75-line screen enthusiasts follow its appearance through day by day? Their judgment is a good deal like the fellow who hitched the race horse alongside his Percheron to the dray. At the start it was a swell looking team but the aristocratic horse just "couldn't take it."

Some of our executives in the editorial and mechanical departments, after gazing at a beautiful feature made with a 75-line screen upon which the engraving department has spent considerable spare time under conditions which are not comparable to those existing in the production of a daily newspaper, resolve enthusiastically to go 75-line screen one hundred per cent. They do not consider the rush of work which calls for a hurried "bite" or so upon each subject. Common sense tells us that it is easier to etch down quickly into interstices 1/65 in. apart than it is to attempt the same operation into spaces 1/75 in. separated, and that a dot pyramided 65 to the inch will take the rolling stress in the stereotype room better than one 75 to the inch. These hastily etched idealistic 75-line screens chill most readily in the stereotype process, particularly if shallow (as nine out of ten of the run-of-paper 75-line screens are). And when the pressman gets this combination, certainly trouble is his ration if he must print with it.

In a metropolitan daily where the 75-line screen is in use, a recent checkup with the depthometer showed that not one of the cuts had a depth to exceed 0.004 in. in the *original* etching and fifty per cent of the total cuts showed a depth of less than 0.0025 in. The pressman was on the carpet that day for the appearance of the paper. Could anything be more ridiculous? Perhaps you have had the experience.

After all, the end to be achieved is a well-printed paper. If those in authority want cuts made with 75-line screen then let 'em equip the etching room with depthometers and give them time enough to do the job. Merely issuing an order calling for a certain kind of screen won't do. Time enough to make the cuts properly should be included in the order.

And just one last statement that you can check for yourself if in doubt. A 55-line screen run as a display cut on the first impression will show less strike-through from the other side than the same subject screened to 75 lines on the first impression. Believe it or not, but make the test.

Faithfully yours,

Impression Pete.

"The Machinist and His Job"

Several of the I. T. U. Lessons in Printing have been revised to bring them up to date. Among the reprints are: "How to Design and Set Letterheads," "How to Compound Words," "The Proofreader and His Job," and "The Operator and His Job." A new lesson, "The Machinist and His Job," has been published. It is a matter of special mention that the lessons are revised every five years to harmonize with rapidly changing conditions within the industry by way of keeping pace with machine design, processes, usages and typographical trends. It is to be hoped the lesson on machine maintenance will undergo certain changes at an early date for the reason that the average student is not capable of differentiating between instructions suitable for the Linotype alone and those intended solely for the Intertype when the instructions are not so indicated in the text matter. The differences are of sufficient importance to be indicated as such.

It is evident that practical plant machinists were not consulted in the preparation of the lesson. This has special reference to electric metal pots, overhauling keyboards, removal and repair of spaceband boxes, escapements, spaceband cleaning, care of the main cams and, of all things, the removal of permanent dowel pins from precisely positioned machine parts!

With all due respect to the *authorities* whom it is stated approved the subject matter in the lesson, one feels that considerable revision is necessary before its details may be grasped easily by the student who, it must be remembered, doesn't possess the mental background to enable him to distinguish between the machines for which the instructions are intended. Simple annotations would remedy this defect.

There is no justification for the statement that spacebands should be polished by rubbing them *gently* on a board, when as a matter of fact a minimum of 15 lbs. pressure is required to polish off the oxide stain on the average spaceband sleeve. And when should the board be renewed? Just how one drop of coal oil deposited weekly upon each of the main cams is expected to keep the cam surfaces functioning properly without deterioration is beyond comprehension.

The lessons comprising the series with the exception of the one entitled "The Machinist and His Job," seem to have been prepared by real authorities. It is the wish of the writer that he could say the same of the hodge podge gotten together for mechanical instruction. The lesson does contain some correct information but much of it is misinformative hooey.

The majority of the youngsters now learning the art of composing machine maintenance are not familiar with the fundamentals of machine shop practice. This is a serious enough reason for furnishing reliable instructional material about composing machinery. Another reason is that the machinist's employer expects to obtain maximum production with minimum parts and supplies expense.

H-S-P Sales and Engineering Meeting

The annual sales and engineering meeting of the Harris-Seybold-Potter Company was held August 9-11, 1934, at the factory and general offices, 4510 East 71st Street, Cleveland. Convention headquarters were in the Hollenden Hotel.

The meeting was attended by twenty-five representatives from all parts of the country. H. A. Porter, Vice President in Charge of Sales, conducted the meetings and was assisted by J. W. Valiant, Vice President from New York, William Guy Martin, Western District Sales Manager from Chicago, and A. T. Walker, Central District Sales Manager of Cleveland. Long distant honors go to George L. Coffman from San Francisco, and M. L. Mann from New Orleans.

Those present were: A. F. Harris, R. V. Mitchell, N. L. Daney, H. A. Porter, A. S. Harris, A. T. Walker, C. W. Harrold, H. M. Hubbard, H. B. Markle and J. J. McClinton, all of Cleveland; J. W. Valiant, C. R. Kaddeland, William Heiser and H. W. Blomquist of New York; W. G. Martin, R. R. Perry and J. L. Bluemer of Chicago; H. F. Dixon of Philadelphia; H. R. Baker of Akron; W. H. Newey of Boston; R. K. MacNeal, Detroit; G. L. Coffman, San Francisco; M. L. Mann, New Orleans; S. W. Morris, Minneapolis, and R. H. Randall, St. Louis.

Mixing Colored Printing Inks

In the Pressroom Can Be Done Best by Pressman Selected from Force — Mixing Tables and Equipment Required

By ROBERT F. SALADE*

IN EACH of a number of large color-printing plants, one pressman has been selected from the force to attend to the major portion of all special mixing of colored inks required in the pressroom. The pressman is an expert in this work, having had long experience in the art of color-matching and in the mixing of color and tints from regular stocks of printing ink. The pressman has a laboratory which is equipped with a power ink-mixing machine, scales, graduated vessels used for measuring liquids, test tubes, a hydrometer, scientific color charts and other apparatus essential for the exact requirements of color-matching.

BROWNS BY TWO-COLOR MIXTURES

Color	*Parts*	
Green-brown	2 red	4 green
Red-brown	12 red	1 black
Yellow-brown	4 yellow	3 red-brown
Purple-brown	6 red	1 deep blue
Chocolate-brown	12 red	2 deep blue
Copper-brown	15 vermilion	1 black
Sepia-brown	20 orange	1 black
Maroon-brown	15 red	2 black
Photo-brown	1 vermilion	1 black
Snuff-brown	8 vermilion	1 deep blue
Tan-brown	2 yellow	1 purple
Bronze-brown	3 bronze red	1 bronze blue
Brown-black	1 red	1 black
Brown-tint	1 red-brown	40 white
Yellow-brown tint	1 yellow-brown	30 white

Actual working conditions in each printing plant are different, of course. However, the main facts and technical information in this article should prove helpful to printing plant executives in general.

It is a good plan to have on hand always several different shades of red and several different shades of blue. Moreover, the two most useful kinds of yellow—chrome and lemon yellow—should be carried in stock, and no pressroom will be complete without a liberal quantity each of regular mixing white and transparent white. From these colors and with the addition of black, practically any other color or tint may be mixed.

The well-managed pressroom usually has in stock a variety of the so-called "standard" colors: Scarlet lake, vermilion red, brilliant scarlet, bronze red, process red, bronze blue, deep blue, process blue, bright blue, lemon yellow, chrome yellow, process yellow, mixing white, magnesia white, opaque white, and the usual job blacks. The most satisfactory results in color-mixing are to be had when all of the inks used come from the same manufacturer, as in some instances a certain color purchased from one manufacturer will not work well with some other color purchased from another manufacturer.

In most jobs of color-mixing the pressman will have to set his own standard of colors, something that can be done to the greatest advantage by the plan of mixing two or more shades of red to form a "standard" shade of red; two or more shades of blue to make a "standard" blue, and certain portions of lemon and chrome yellow to form a "standard" yellow. These three primary colors—yellow, red and blue—can be used in the making of green, brown, purple, orange and many other colors. Black and white inks, however, will be necessary to mix certain shades of brown, green, etc., in addition to the primary colors.

PURPLES BY TWO-COLOR MIXTURES

Color	*Parts*	
Regular purple	10 rose-lake	1 blue
Light purple	2 reg. purple	1 white
Violet	4 rose-lake	1 deep blue
Violet-blue	10 violet	1 blue
Bright violet	2 reg. purple	1 deep blue
Scarlet purple	15 rose-lake	1 blue
Purple tint	1 reg. purple	50 white
Violet tint	1 violet	30 white
Typewriter purple	1 reg. purple	4 white

Process colored inks—yellow, red and blue—are excellent for the purpose of mixing delicate tints. These process colors are transparent and brilliant, and from them many bright colors may be mixed which afterwards could be worked out in a tint. As a general rule, process yellow, red and blue are better for mixing tints that the "standard" colors of yellow, red and blue.

High-grade white inks are exceedingly important to good color-mixing; in fact, the white ink is often the greater part of the color to be used in printing, and if the white is not all that it should be for the occasion, the entire job of printing will show the defect. A countless number of color-mixing jobs, especially solid background tints, have been spoiled by the use of a white which was not suitable for the job.

Readco Ink Mixer for use in mixing inks in the pressroom. Driven by motor power, this mechanism does thorough work.

Consider the following different kinds of white when about to mix a special tint: Plain mixing white, opaque white of heavy body, flake white, magnesia or transparent white, and gloss white. Any of these whites may be obtained from a large ink manufacturing firm. The plain white may be used for the average small job to be printed in a tint on paper stock. The opaque white should be used for a solid tint to be printed on rough cover stock. The flake white is usually used for a

Continued on page 34

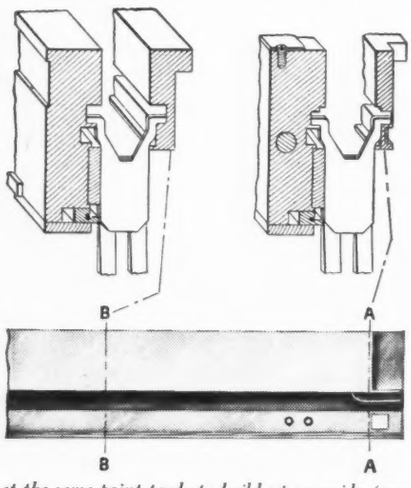
*Author, Editor and Technical Writer, Philadelphia, Pa. All rights reserved.

A Big "Little" Improvement

No one wants to clean spacebands. It is purely a drudgery operation more or less according to the number of sets to be cleaned. Without much speculation it may be stated that spacebands are given regular cleaning through fear of the consequences rather than from the joy of performance.

The cleaning and polishing of spacebands actually accomplishes two things: The graphite provides lubrication for the sliding motion between the sleeve and wedge and also sets up a temporary insulation to prevent hot metal oxidizing the constant area on the sleeve adjacent the matrix cell.

What happens when spacebands are rubbed on a board charged with graphite is that any metal oxidation is rubbed from the casting point of the sleeve and at the same time the steel surface is brought to a high polish which is resistant to the thermal and corrosive action of molten line-slug metal. That is, it is resistant for a limited period of time. The pressure applied to a spaceband, as our friend E. O. Tungate has it, also forces minute particles of graphite into the pores of the steel. These minute graphite particles cling to or fill in the tiny openings in the surface of the sleeve and wedge until after a limited period of time when, due to the action of the spaceband in operation, the graphite filters out or is shaken from the spaceband. The polishing operation must then be repeated.



Herewith are shown sectional end views of a Linotype first elevator jaw. The lower halftone represents a composite view of a back jaw showing comparative widths of old and new style slots. At A *is shown the spaceband sleeve lug slot which does not permit an upward movement of the sleeve during justification. This causes the same point on the sleeve to be presented to the mold cell each time the spaceband is justified in a matrix line. The repeated casting of hot metal at the same point tends to build up an oxide (or even a metal) accumulation. This accumulation, as is well known, is injurious to the side walls of matrix casting walls. At* B *is shown the new widened slot which permits a variable upward movement of the sleeve during justification. Since the casting edge of the sleeve may be presented in a different position each time the spaceband is justified, the oxidation is minimized and, consequently, is less difficult to remove.*

The spaceband cleaning and polishing process has remained fairly constant for a period of years and it is for this reason that an improvement in the method is very welcome. It is true that machines have been designed for the purpose of doing the work automatically but hand cleaning prevails in the great majority of line-composing plants. The improvement mentioned above is in the Linotype first elevator jaw spaceband sleeve lug sustaining slots which have been widened considerably. During justification of the spacebands in the matrix line these widened slots permit a slight upward movement of the sleeve which may vary according to the justification pressure and produce a wiping action similar to that of the bands or long wedges. In this way the sleeve presents a variable casting point which minimizes the familiar oxidation when the casting point of the sleeve is repeatedly presented to the mold in a constant position.

However, this improvement is not to be taken as a means for cleaning spacebands at longer intervals. It is simply a means for making the work easier for the one who must clean and polish the spacebands.

Each machine should contain a full set of spacebands. The more spacebands, the less frequently the sleeves will be subjected to hot metal, hence, the less oxidation at the casting point of the sleeve, and, in turn, the easier it will be to polish the sleeves.

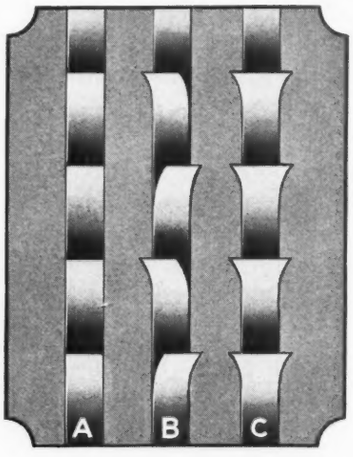
While discussing spaceband cleaning, some mention should be made that oxide-free spaceband sleeves naturally tend to preserve the thin side walls in matrix cells. Better proofs will be secured in the composing room and hair lines between letters will not cause certain characters to take on a distorted appearance even if the hair lines don't show in print. Clean spaceband sleeves are especially good for the most frequently used round-bodied lower case letters. The same thing applies, also, to lower case "i" and "l" matrices.

Henry Boddiker Dies

Henry Boddiker, 86, died August 17, at his home in Chicago. Mr. Boddiker was the dean of linotype machinists in Chicago for many years. He retired as head machinist for the Chicago *Tribune* about twelve years ago. Previous to his connection with the *Tribune* he was head machinist on the Chicago *Chronicle*.

He was well known throughout the United States, having traveled for a number of years for the Campbell Printing Press Co. as an erector.

Clearance for Saw Teeth



Certain fundamental technical facts bear republication from time to time. This is true of saws used in the printing industry. The illustration is printed here by courtesy of W. C. Tesch of the Tesch Manufacturing Company, Milwaukee, Wis.

In the illustration, *A* represents a section of circular metal-cutting saw showing the absence of clearance in cut or kerf. If the saw is used after set or swaged tip of the tooth has disappeared through repeated filings, its sides will collect metal through frictional contact with the metal which is being cut and the saw will not operate freely.

At *B* is shown a section of a set tooth circular saw blade with every alternate tooth set right and left. This is the original method for giving a wide cut or kerf to provide freedom from friction in the cut. The principal fault of set teeth is that they are subject to side strain and cause the blade to "wobble" or vibrate slightly.

Undoubtedly the saw teeth shown at *C*, when properly swaged, give the best results. In addition to providing clearance for the sides of the saw, each tooth cuts into the work without setting up any side strain in the saw blade. Each tooth, progressively, does its bit. On stereotype saws, Mr. Tesch states, it is advisable to swage every other tooth—the swaged teeth doing the cutting and the intermediate teeth chipping out the metal in the center of the cut. It will be seen that the cutting tips of the unswaged teeth are slightly higher than the swaged teeth.

TRADE LINOTYPE MARK

Over the Hurdle of Size . . .

5 point to 144 point . . . with the Complete System

And size isn't the whole story . . . not by a long jump! The Complete Linotype System provides every unit for speeding work through your composing-room! Just check up . . . there's a Linotype that's exactly suited to every job!

And remember . . . the Linotype gives you a wide selection of well-designed faces . . . economical composition . . . plus the convenience of slug make-up.

No matter what your production conditions are, the Complete Linotype System can improve them . . . to your added profit!

Single Distributor Linotype for ordinary composition. *Continuous Composition Linotype* for mixed composition or quick shifts. *Two-In-One Linotype* for text and display. *All-Purpose Linotype* for maximum flexibility and full range of sizes.

MERGENTHALER LINOTYPE COMPANY, BROOKLYN, N. Y.

Linotype Caslon

Henderson Ludlow Matrix Stick

WILLIAM T. HENDERSON, of 2124 Eye St., N. W., Washington, D. C., and who is a line-casting machinist with the Washington, D. C., *Star* composing room has developed a matrix stick for use in connection with Ludlow composition which will permit composing and casting from 1¼ in. (60 to 84 pts.) matrices and ⅞ in. (60 pt. and below) matrices in the same line. The idea is to make possible the casting of slugs containing one or more large letter characters with a line of smaller letter characters, or in the case of advertisements, display price lines may be cast containing both large figures and superior figures of any point size in the same line. This is accomplished by fitting two slides opposite each other in the stick frame. The slides and the stick frame are graduated in picas. The stick may

CAPS AND SMALL C

Specimen line set in 72-pt. and 18-pt. matrices in the Henderson Ludlow stick and cast on one slug. Printed direct from the slug.

be used for all large-size matrix composition, all small matrices or for a combination of both in the same line.

Before development of this stick, Mr. Henderson states that due to not having super matrices in all large fonts it was necessary to use the smaller matrices with the large ones in the large size stick. When this was done it was necessary to stop the machine immediately after casting the slug in order

$28.75

Specimen line set in 72-pt. with 18-pt. superior figures in the Henderson Ludlow stick and cast on one slug. Printed direct from the slug.

to take the stick out of the machine to be sure that none of the small matrices had been pulled out of the stick. If any of them had been pulled out, it would be necessary to lift the table top and pick them off the slug. When the combination line was permitted to go through in the usual manner (with one or more matrices stuck to the slug) the shearing pin in the driving wheel would be broken. This damaged the matrices and put the machine out of order.

With Mr. Henderson's matrix holder, or stick, both sizes of matrices are supported on the ends, so that matrix pulling is prevented. The stick is designed so that it can be used for offset, large and small, and combination slugs. If desired, the stick will hold enough matrices to cast 25 picas and 9 points instead of the usual 22-pica slug.

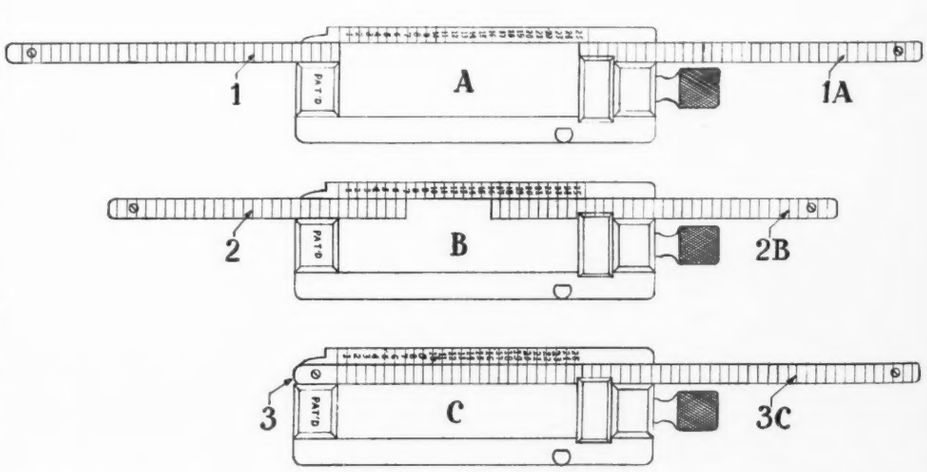
In the Henderson Ludlow stick, a valuable combination of 48-pt. and 24-pt. can be obtained and both sizes will be aligned at the top. In the case of 48-pt. and 12-pt. or any of the sizes in between, alignment can be obtained at top *or* bottom.

Diagrams showing the flexibility of the Henderson Ludlow Matrix stick. At *1* and *1a* are shown the slides fully withdrawn from the stick in order to compose a line from 1¼-in. matrices.

In the diagram, *B*, at *2* and *2b*, are shown the slides partially withdrawn in order to compose a combination line consisting of 1¼-in. and ⅞-in. Ludlow matrices, the latter to be used as superior figures, or in case of reading matter, the slides may be so adjusted to facilitate composition of a large initial letter to be used with smaller reading matter. Cap-and-small-cap lines may also be composed. The slides abut against the large matrices and form a support for the smaller matrices in the same line.

In the diagram *C*, the right-hand slide *3c* is fully withdrawn and the left-hand slide *3* has been pushed in, which permits composing a line from the smaller matrices.

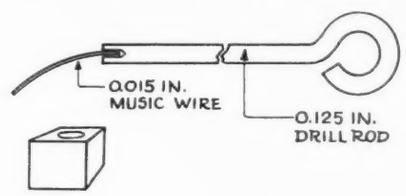
As will be seen, both slides are movable the full length of the opening or slot inside the stick frame. Both sizes openings in the stick are offset which permits greater combination variations.



Diagrams of the Henderson Ludlow Matrix Stick with slides shown in various positions. By means of this stick both 1¼-in. and ⅞-in. matrices may be composed and cast all on one slug in one operation. The slides compensate for the difference in matrix sizes.

Clock Oil Applicator

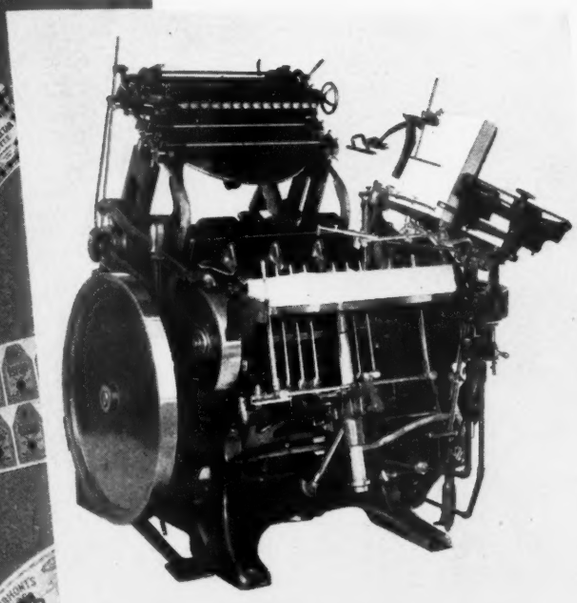
Applying clock oil to the pivots of line-casting machine keyboard cam key bearings is a particular job. The use of a toothpick or similar instrument has a disadvantage since too much oil will be transferred to the cam pivots. For those who do not use a hypodermic needle for this purpose, a clock oil applicator may be made from a length of 0.125 in. drill rod or cold rolled steel and a 1-in. length of 0.015-in. music wire. Bend an eye at one end of the rod to form a handle as shown in the diagram and drill a No. 52 twist drill hole to a depth of 3/16 in. on the other end of the rod. Flow solder into the hole and insert the music wire applicator in the hole and hold in position with a pair of tweezers until the solder solidifies. The applicator is also useful for applying clock oil to the bearing of escapment pawl rollers in linotype multiple distributor boxes.



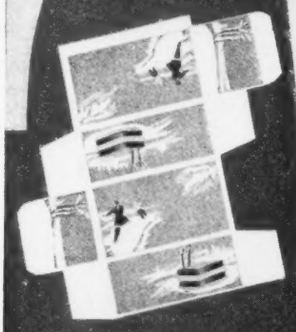
The cube shown at the lower left has a ⅜ in. depression drilled in the top to a depth of ⅛ in. The cube may be made from stereotype base cut to size or a 48-pt. foundry or monotype quad may be used. The shallow depression drilled in the top of the cube is filled with clock oil. In this way just enough oil will cling to the applicator point to avoid applying too much oil to a cam pivot.

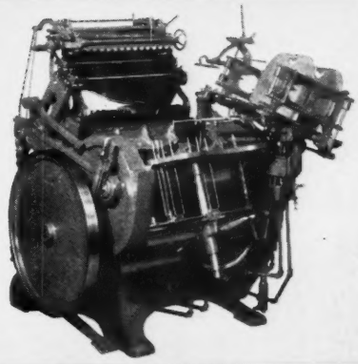
FOR RAPID PRODUCTION AND LOWER COSTS

EVEN ON DIFFICULT JOBS



The Regular 14½x22 Craftsman Automatic Unit; provides steady low-cost production at speeds up to 2600 impressions per hour.





The Heavy Duty 14½x22 Craftsman Automatic Unit, with heavier gears, shafts and bearings and with double gear drive. Designed especially for continuous operation on stamping, embossing, cutting, creasing, book cover printing, etc. Production speeds up to 2300 impressions per hour.

THE goal of every printer—a profit on every job. But when "out of the ordinary" work is attempted on ordinary press equipment that goal is difficult to reach.

Here's where the plant using one or more 14½x22 Craftsman Automatic Units has the edge on costs and competition. This versatile automatic press, designed for the widest possible variety of regular platen presswork, also provides low-cost automatic feeding for many jobs difficult even to hand feed on other presses.

You can use the 14½x22 Craftsman Automatic Unit to earn steady, year-'round profits on broadsides, circulars, commercial forms and stationery, envelopes two-up, catalog and book covers, street car and window cards—

Use it also for halftone and color printing (you'll find its distribution and register adequate for your most particular work)—

Use it for folding cartons, fans, indicator dials, advertising novelties and odd shapes—

For light stamping and embossing, for die-cutting, scoring and creasing—

For any size of sheet from post card to press capacity, any stock from manifold to litho board, even for celluloid, leather and thin wood—

In short, the 14½x22 Craftsman Automatic Unit is the profitable press to use both on ordinary and unusual work of every kind up to the limits of its capacity—wherever rapid automatic production will give you lower costs and a better chance for profit.

In proportion to its versatility and output, the 14½x22 Craftsman Automatic Unit, Regular or Heavy Duty, costs little to own and less to operate. Write us for samples of work, specifications and price.

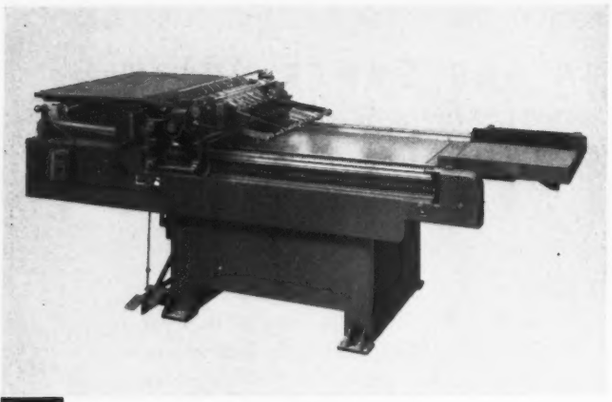
THE CHANDLER & PRICE 14½x22 CRAFTSMAN AUTOMATIC UNIT, REGULAR AND HEAVY DUTY

THE CHANDLER & PRICE COMPANY • CLEVELAND, OHIO

Printing Presses and Paper Cutters

Branch Offices and Display Rooms:

New York: Grand Central Palace, 480 Lexington Avenue • Chicago: Transportation Building, 608 South Dearborn Street

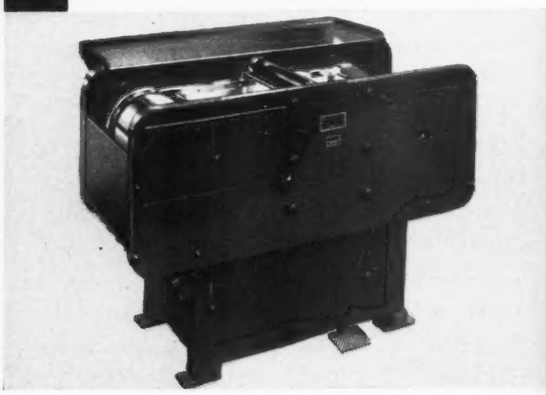


1000 Page Proofs per Hour

Vandercook No. 325-A Power Proof Press is a modern press for fast-moving newspapers.

Forward-looking publishers know the advantage of giving advertisers *good* proofs, quickly—and in ample quantities for checking and advance posting. You can do this with the Vandercook No. 325-A.

Learn why all major newspapers in New York City operate No. 325-A Presses or the No. 25 shown below. Write NOW.



40 Good Proofs Per Minute

No. 23 Vandercook Electric Proof Press gives *good* proofs up to six full columns wide at the rate of 40 per minute.

This new, compact, high-speed press is equipped with special Vandercook impression cylinder and rubber rollers insuring good proofs from forms and galleys that vary as much as .015 in height.

Necessary equipment to the large newspaper where speed is important. Write for complete information and prices.

VANDERCOOK & SONS, Inc.
Originators of the Modern Proof Press
908 North Kilpatrick Ave. Chicago, Illinois

. . Craftsmen

(Continued from page 9)

prominent members of the Toronto Club of Printing House Craftsmen.

TECHNICAL ADDRESSES

The program presented nine speakers who covered a widely diversified field of technical subjects. Each was well prepared and presented by a man of recognized authority and ability in his field.

"Art and Its Relationship to Printing"—Russel Rabjohn, Rabjohn Illustrators, Toronto.

"What Research Has Done for the Lithographic Industry"—Dr. D. J. McDonald, Educational Director Lithographic Technical Foundation, New York.

"The Process and Manufacture of Rubber Printing Plates"—S. G. Crowell, Chemist, Viceroy Mfg. Co., Ltd.

"Aniline Printing and Its Possibilities"—Chas. Dunnat, Southam Press, Toronto.

"The Process and Use of Celluloid Plates"—Oliver Watson, Superintendent Brigdens, Ltd., Toronto.

"Rotogravure"—DeWitt A. Patterson, Rosenow Company, Chicago.

"A Few Objectives for the Clubs of the Printing House Craftsmen Movement"—Gilbert Farrar, Intertype Corporation, New York.

"A Paper on Printing on Paper"—Neil Powter, Howard Smith Paper Mills, Montreal.

"Developments of a Decade in Electrotyping"—J. Homer Winkler, Ace Electrotyping Co., Cleveland.

REGISTRATION OF DELEGATES

The daily registration of delegates was recorded upon a large blackboard at the registration desk. The list below shows that thirty-four clubs were represented; a total of 518 registered—329 men and 189 women. Toronto Club registered practically 100%, giving evidence of unity of spirit and effort in making the 1934 convention a success.

Baltimore	11	Pittsburgh	2
Boston	10	Portland	3
Buffalo	5	Providence	9
Chicago	58	Richmond	2
Cincinnati	10	Rochester	8
Citrus Belt	2	Sacramento	1
Cleveland	9	San Francisco	4
Columbus	2	Santa Barbara	1
Connecticut Valley	2	Seattle	2
Dayton	2	St. Louis	6
Detroit	11	Tacoma	3
Grand Rapids	1	Toronto	226
Milwaukee-Racine	5	Vancouver	1
Minneapolis	2	Washington	9
Montreal	19	Winnipeg	6
Newark	15	York	8
New York	37	Miscellaneous	14
Omaha	2		
Philadelphia	15	Total	518

LOYAL OFFICER RETIRES

The 1934 convention marked the close of the long term of continuous official service to the Craftsman Movement of Harvey H. Weber, Buffalo. Harvey entered the official family as second Vice President in 1921; was elected first vice president in 1923; was president in 1924, the year of the Milwaukee Exposition. Reluctant to lose his valuable counsel upon the Board of Governors, he was elected treasurer in 1925, which office he has held up to this year 1934. Thirteen years of untiring work. His record will remain indelible on the records of the Association, outstanding in honesty, businesslike methods introduced; and the excellent manner in which he has performed every detail of his work.

CONVENTION CITY FOR 1935

Cincinnati, Ohio, cordially and impressively invited the International Association of Printing House Craftsmen to hold its Sixteenth Annual Convention, with the Cincinnati Club of Printing House Craftsmen. The invitation was accepted.

CONVENTION SUMMARY

As a new feature of Convention Programs, Past International President

ELECTION OF OFFICERS

The work of the 1934 administration is considered by every thinking Craftsman as consisting of constructive achievement. In the face of the unparalleled conditions from which we are emerging, it was conceded that to make changes would deprive the men at the helm of the opportunity to further build their program of advancement. Therefore, with unanimous voice the convention returned to office every officer, except treasurer Harvey H. Weber, Buffalo, who had, previous to the convention, announced his retirement. The 1935 officers are:

THOS. E. *Cordis, San Francisco, President.*

JOHN B. CURRY, *Boston, First Vice President.*

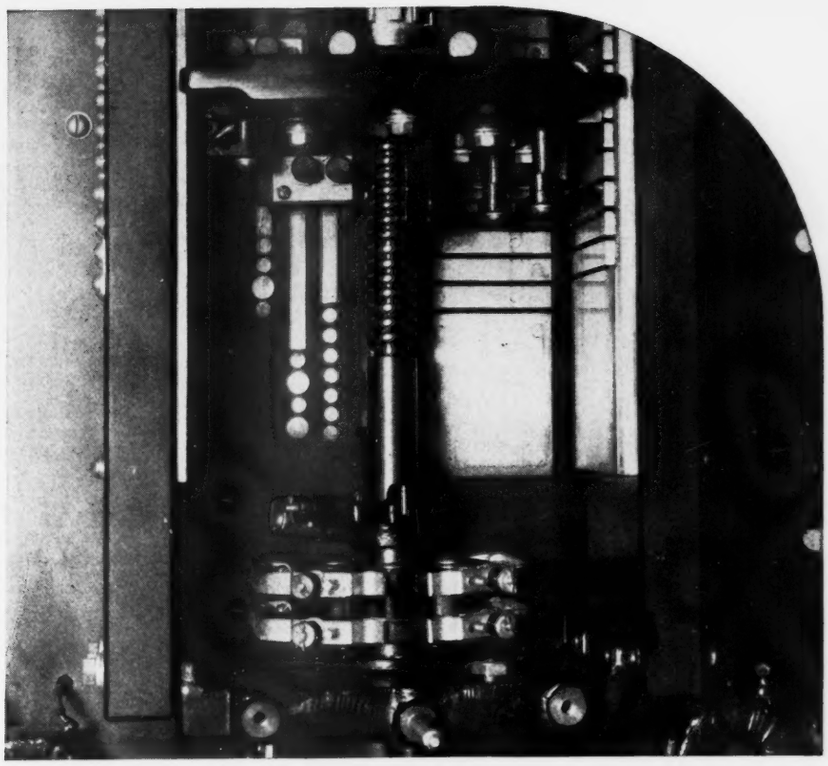
CLARK R. LONG, *Washington, Second Vice President.*

GEORGE J. MARSHALL, *Toronto, Third Vice President.*

MARK MULEE, *Newark, N. J., Treasurer.*

L. M. AUGUSTINE, *Baltimore, Secretary.*

SKF EQUIPPED
BUILT BY
CUTLER-HAMMER INC.



IT'S UP TO SKF BEARINGS TO HELP THE PRESSES

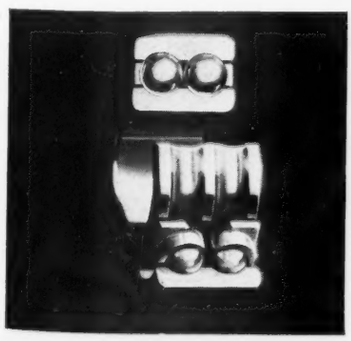
"It's up to the presses" is never more important in the newspaper industry than when a "scoop" has left the composing room and is on its way to the street via SKF-equipped Cutler-Hammer controlled presses and sure bearing performance.

TIME . . . essence of news . . . is reduced to a minimum through these cross head and wiping contacts on an A.C. four motor printing press controller . . . and delay danger is practically nil for there's ability to control at all speeds . . . and SKF dependability to rely upon, which means economical production.

"We have many other devices on which we use SKF Bearings," says Cutler-Hammer, Inc., pioneer manufacturers of electric control apparatus . . . and this means SKF Bearings meet demands of time and mechanical precision through *no adjustments* . . . minimum maintenance . . . smooth, reliable, economical *performance.*

3189

● You may buy a bearing as a bargain but try and get a bargain out of using it, for nothing is apt to cost so much as a bearing that cost so little



SKF INDUSTRIES, INC., FRONT ST. and ERIE AVE., PHILADELPHIA, PA.

SKF
Ball and Roller Bearings

Classified Pages call for Controlled Shrinkage

IT'S the part of the paper where income can be measured with a micrometer, where the smallest variation in mat income affects many dollars' worth of profitable matter.

Classified pages furnish a potent reason for using Certified Mats, mill conditioned for uniform shrinkage.

With adoption of Certified you gain, too, the easy molding, quick scorching, dependable uniformity that make these Mats a gratifying factor in successful publishing.

For dependable stereotyping rely on Certified Mats, made in the U. S. A.

●

CERTIFIED DRY MAT CORPORATION

340 Madison Avenue **New York City**

Certified DRY MATS

Oliver Watson closed the convention sessions by giving a general summary of the three days (not the features that are recorded in the proceedings) which included interesting notes on personalities and incidents.

PROMINENT CRAFTSMEN PRESENT

The convention was honored by the presence of Hon. A. E. (Gus) Giegengack, United States Public Printer, and John J. Deviny, Executive Vice President of the U. T. A. These popular and able Craftsmen who have attained their high rank in the industry are past presidents of the International Association, both having served in that capacity for two terms. Up to this convention they are the only men who have been given this honor.

They are actively interested in the Craftsman movement and hold the ties and associations gained as the most valuable contact in the industry, for it was during the years of practical experience, the years they were among the builders of the "Share Your Knowledge" organization that they laid the foundation upon which they have reached a high rung on the ladder of achievement.

THE PRESIDENT'S RECOMMENDATIONS

Details of the president's recommendations will be announced later. At present only an outline can be given. Outstanding among President Cordis's thoughts for advancement are:

Technical Institute of Graphic Arts Education. This will probably replace the present educational commission, if adopted.

Making it possible to add contributing members to the association.

Advancing Craftsmen by accepting as members young men of proved ability who are equipped for promotion to executive positions.

Appointment of a Committee on Research, to outline a definite program of standardization in the printing industry to determine that materials used are according to specifications required and other research work.

CANADIAN PRINTING EXHIBITS

A colorful exhibit of Canadian Printing was shown in one of the large parlors adjoining the convention headquarters. Here was shown a fine array of commercial and specialty printing, excellent in quality of design and Craftsmanship. Those responsible for this exhibit are: the Montreal Club; the Winnipeg Club; *Printer and Publisher*, Toronto; *Printing Review*, Montreal; George W. Jones, London, England; Ben Fryer, Sydney, N. W. S., Club; and the many printers who generously contributed specimens.

In another large parlor there were other excellent exhibits showing color work of Students of Western Technical School, Toronto; paper materials, electrotypes; engravings; and inks.

PILLIARD RESIGNS

Convention records for 1934 will include the resignation of a Craftsman, who has served the association with five years of constructive work—Ira D. Pilliard, Chairman of the Educational Commission. Craftsman Pilliard served as vice chairman under Otto W. Fuhrmann in 1928 and was appointed Educational Chairman 1929. The work of the Commission entails a great deal of correspondence, organizing and preparatory work. Craftsman Pilliard has burned gallons of midnight oil in his efforts to build the educational commission to its present high mark. He leaves the job a credit to the association.

DELEGATES PRESENTED SOUVENIR BOOKS

Contributions of the 1934 Convention of souvenir editions were made by the Vancouver and Washington clubs. Both volumes were excellent specimens of craftsmanship in style, format, and bindings. The Washington book, "A Look Back," is the story of the Vollbehr Collection in Incunabula. The Vancouver Book, which is to be mailed to the delegates is an unusually fine piece of work. The text is fully illustrated in plates of black, with many inserts in four-color process; the binding is in full leather, stamped in genuine gold leaf. These volumes will be cherished by those who receive them. The International officers, each club library, and all registered delegates will receive one copy.

The souvenir book idea was conceived and made possible through the efforts of Craftsman Howard N. King, York, Pa., the first books being distributed at the Chicago Convention in 1933.

TORONTO ENTERTAINS ROYALLY

Craftsmen from all points North, East, West and South, arrived in Toronto, Ontario, Canada, Saturday, Sunday and Monday, August 25, 26 and 27. They came by railway, automobile, boat, and air. They found Toronto Craftsmen ready to take care of them for the days of the convention, and the welcome was cordial and genuine.

Sunday was spent touring the city by auto, looking up old friends. Many found their way to room 466 (headquarters for the reception committee) where good cheer and good fellowship prevailed. The evening program featured a concert by the Toronto Philharmonic Society.

Monday the women were entertained at a reception and luncheon tendered by the City of Toronto at the King Edward Hotel. Following this enjoyable affair they were taken through the great Eatons establishment and other large stores of Toronto.

A good fellowship luncheon for the men was the feature of the Monday program. A splendid program was given, featuring a historical sketch of Toronto, given by Wm. C. Kettlewell, managing director Chas. Bush. Ltd. The luncheon was given in special honor to the editors and publishers of the trade publications of the industry. Haywood H. Hunt, editor of the SYK *Review* welcomed the editorial group, speaking highly of the fine work being done by them in keeping the activities and work of the Craftsman organization before their readers.

Monday evening was spent at the Canadian National Exposition.

Tuesday the women were entertained at the Old Mill Tea Gardens, Toronto's finest eating place, located in the outskirts of the city. The architecture, and fitting appointments of this famous place are internationally recognized.

The climax of the entertainment program was the annual banquet and ball, held in the concert hall of the Royal York. The ceremonies opened with the entrance and seating of the international officers, general chairman, local officers, and prominent Craftsmen, who were preceded in the march to the speakers table by a Scottish bag pipe and drum corps, playing a spirited Scottish march.

The rostrum was fittingly decorated with the flags of Canada and America, with a Craftsman emblem in red and white lights, arranged in an effective ensemble.

The merriment of the affair was quited for a moment of silence and serious thought as the curtains across the stage parted and there in a full military setting "Taps" were sounded in respect to Past President Wm. A. Renkel, who passed away during the year, and all Craftsmen who have been called before their Maker. It was a most impressive ceremony.

The only speech of the evening was that given by Craftsman Saunders, past president of the Toronto Club, who presented President Tom Cordis with a beautiful silver serving tray, to be given to Mrs. Cordis as a slight token of the Toronto Club's appreciation of her sacrifice of home ties and social life to the cause of Craftsmanship.

A program of singing, specialty and dance acts was given and Don Marinelli and his band furnished sparkling dance numbers until the hour of 1:00.

More Bleed Page Specimens

Since publication of the article, "Newspaper Bleed Pages" in August, *Printing* EQUIPMENT *Engineer* has received tear sheets from mechanical executives who have printed this type of page successfully.

We are in receipt of a tear sheet taken from a four-page section for a local store printed in the plant of the Missouri Agricultural Publishing Co., 2206 Pine St., St. Louis, Mo., under the supervision of Supt. H. E. Tischer. One page of the section was printed to carry a complete color run-off.

In its edition of July 31, the Portsmouth (O.) *Times* printed a promotional page in black and red ink. The top and bottom of the page carried a red band and either side of the page had a black run-off.

The Painesville (O.) *Telegraph* on Friday, August 24, printed a bleed page in black and orange ink for Warner's Market. The orange color was printed to run off all four edges of the page.

Hoe Reorganization Plans

R. Hoe & Co., 138th St. and East River, New York, New York, manufacturers of printing presses which has been in equity receivership since April 21, 1932, was granted permission by Judge John M. Woolsey, on July 30 in the U. S. District Court, New York, to reorganize under Section 77B of the bankruptcy act. The Irving Trust Co., which served as equity receiver, was appointed temporary trustee under a nominal bond of $1000. Hearing on appointment of a permanent trustee and acceptance of the proposed reorganization plan was scheduled to be held on August 24.

BOOTH'S

Printers' ZINK Cut Cement

A New Booth Product made Especially for a Specific Purpose

Read what two composing room superintendents think of this cement for fastening cuts of any size to all kinds of base. We have many other enthusiastic boosters in commercial and newspaper plants.

Cleveland, Ohio,
August 16, 1934.

E. A. Booth Rubber Company,
Cleveland, Ohio.

Gentlemen: We use Booth's Printers' ZINK Cut Cement at the *Plain Dealer* because it relieves us of any anxiety concerning misplaced cuts.

We are pleased, too, that none of the cuts tangle with the inking rollers on the proof presses with the resultant damage to type, rules and impression cylinder packing.

Cordially yours,
The Plain Dealer Publishing Co.,
MORT MOEDER,
Supt. of Composing Room.

Cleveland, Ohio,
August 17, 1934.

The E. A. Booth Rubber Co.,
Cleveland, Ohio.

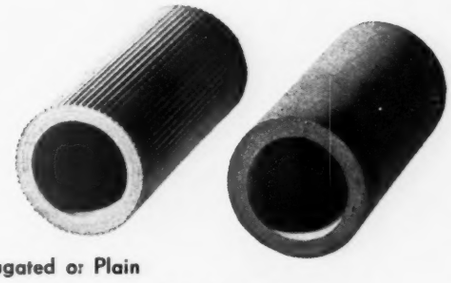
Gentlemen: Your ZINK Cut Cement fills a long felt want in our composing room by compelling cuts to stay where put for all purposes from proofing to mat rolling.

Yours very truly,
The Cleveland *News*,
P. S. GRANT,
Composing Room Supt.

50c per tube; $5.00 per dozen tubes.

Put up in no-waste nozzle-applicator collapsible tubes.

Have YOU Tried Booth's Green Keyboard Rolls?



Corrugated or Plain

$1.20 per Pair, $6.60 per Dozen

Made with great care under laboratory control at all times. Booth rolls present a constantly dependable tread which insures promptly revolving keyboard cams. These rolls are of constant diameter and are so compounded that they are permanently resilient for the life of the roll. Colored green for your protection.

The E. A. Booth Rubber Co.
364 Rockefeller Bldg. Cleveland, Ohio

WHY WE STICK TO IMPERIAL

We Get Better Service

"OF course, better service isn't the only reason we stick to Imperial, but it is one of the big reasons. Before we Imperialized our plant we used to place our order for metal then "burn up the wires" trying to get prompt delivery. Many is the time we have literally shivered in our boots because we were badly in need of metal and metal didn't come.

"All this was eliminated when we changed to Imperial. They have a warehouse close to us and our requirements are promptly and efficiently delivered. The two other big reasons we stick to Imperial are lower yearly metal costs and a better looking sheet. Our experiences with various metal houses have prompted us to stick to Imperial."

Imperial METAL

THE IMPERIAL TYPE METAL CO.
Philadelphia · New York · Chicago · Los Angeles

Patents for All Branches

In Printing Industry—Lithographic Commercial, Newspaper Printing and Line-Casting Patents Are Allowed

JULY-AUGUST

Printed Copies of Patents Are Furnished by the Patent Office at 10 Cents Each. These May Be Obtained by Addressing the Commissioner of Patents, at Washington, D. C.

1,964,695. LINE COMPOSING AND TYPE CASTING MACHINE. Samuel E. Sperry, Hollis, N. Y., assignor to Intertype Corporation, Brooklyn, N. Y., a corporation of New York. Application September 11, 1931, Serial No. 562,390. 43 Claims. (Cl. 199—50.)

1. In a line composing and typecasting machine having a vise embodying opposed jaws adapted to be set to receive full length matrix lines between them, means for moving at least one of the jaws toward the other jaw to close against a short length matrix line, and means independent of the jaw closing means to act automatically on the movable jaw while it is in short-line closing position to force it from such position toward the other jaw to clamp and lock such short length matrix line endwise.

1,964,711. INKING DEVICE FOR PRINTING PRESSES. John T. Arveson, St. Paul, Minn. Application September 25, 1931. Serial No. 565,084. 8 Claims. (Cl. 101—195.)

1. An inking device for printing presses for printing in two colors simultaneously and for printing in a single color, the device including an inking plate having revoluble inking disks incorporated therein, there being a plurality of such disks at either side of the plate, the plate and disks providing an ink distributing surface for the inking rollers of a press, means for mounting the inking plate on the press and supporting the plate in position for two-color printing in which position the inking rollers carry ink from one disk to another only at the same side of the plate the means providing for the shifting of the plate into an alternate angular position for single color printing in which alternate position of the plate the inking rollers carry ink from one disk at one side of the plate to another disk at the other side of the plate, and means for turning the disks in both of the positions of the plate.

1,964,850. TYPOGRAPHICAL COMPOSING MACHINE. John H. Hilpman, Hollis, N. Y., assignor to Mergenthaler Linotype Company, a corporation of New York. Application January 4, 1933. Serial No. 650,054. 18 Claims. (Cl. 199—22.)

1. A keyboard mechanism for typographical composing machines including, in combination, a series of matrix releasing finger keys, a spaceband releasing finger key, and means whereby the spaceband releasing key may be connected directly to a selected plurality of the matrix releasing keys, the connections acting to transmit the normal actuating movement of one key to the others to bring about their conjoint operation.

1,964,859. SLUG CASTING MOLD. William L. Peterson, Springfield, N. Y., assignor to Mergenthaler Linotype Company, a corporation of New York. Application July 11, 1932. Serial No. 621,800. 8 Claims. (Cl. 199—54.)

1. In or for a slug-casting machine, a mold comprising side and end walls defining between them a mold cavity, and a core member supported within the cavity and terminating short of the front face of the mold so as to leave a recess in such front face, the core member having its slug guiding surface extended across the recess substantially to the front face of the mold.

1,964,874. PRINTING PRESS. Harland Fankboner, Chicago, Ill., assignor to The Goss Printing Press Company, Chicago, Ill., a corporation of Illinois. Application February 25, 1932. Serial No. 595,081. 9 Claims. (Cl. 242—75.)

1. In a web controlling mechanism, the combination of means for rotatably supporting a web roll, an electrically energized brake for controlling the tension of the web, a pilot roller and photo-electric means controlled by the pilot roller and controlling the brake.

1,964,931. SHEET FEEDING DEVICE. Georg Spiess, Leipzig, Germany. Application May 29, 1931. Serial No. 540,968. In Germany February 19, 1930. 12 Claims. (Cl. 271—38.)

1. A paper feeding machine having in combination, a table, means for feeding a feathered bank of sheets to the table, pneumatic means cooperating with the front end of the bank for controlling the feed of the bank to maintain its front end in substantially uniform position, vertically movable mechanical means for lifting the foremost sheet, and means to actuate the vertically movable means in unison with the operation of the pneumatic means.

1,965,029. PROCESS AND APPARATUS FOR CUTTING PRINTED PAPER WEBS. Albrecht Bolza, Wurzburg, Germany, assignor to the firm Schnellpressenfabrik Koenig & Bauer Aktiengesellsenaft, Wurzburg, Bavaria, Germany. Application June 17, 1929. Serial No. 371,609. In Germany June 20, 1928. 16 Claims. (Cl. 164—68.)

7. Apparatus for continuously feeding to a cutting apparatus printed paper webs provided with registering marks spaced correspondingly with the impressions, comprising cutting cylinders, a pair of contact rollers situated in the path of the printed web in advance of the cutting cylinders the contact rollers controlling the changes of speed of the web and being driven at such a speed that a whole number of turns of the contact rollers corresponds to one turn of the cutting cylinders, and means for feeding the paper web alternatively at one and the other of two different constant speeds.

1,965,216. PLATE SETTING MEANS FOR ROTARY PRINTING PRESSES. Robert A. Brown, Nashua, N. H., assignor to Nashua Gummed and Coated Paper Company, Nashua, N. H., a corporation of Massachusetts. Application February 21, 1933. Serial No. 657,785. 7 Claims. (Cl. 33—184.5.)

7. A plate registering gauge for rotary presses comprising a flexible steel tape, end supports therefor, an index variably receivable along and upon the tape, and means to tension the tape in operative position.

1,965,479. SLUG CASTING MACHINE. Anthony J. Stouges, Queens Village, N. Y., assignor to Mergenthaler Linotype Company, a corporation of New York. Application December 9, 1932. Serial No. 646,433. 20 Claims. (Cl. 199 — 59.)

1. In a slug casting machine, the combination of a mold, means for presenting a matrix line to the mold in one or another of different casting positions according to the size of the matrix characters, means for ejecting the cast slug from the mold, a guide through which the ejected slug passes, the guide having one of its walls adjustable to vary the distance therebetween, and automatic means for adjusting the guide wall in accordance with the casting position of the matrix line and hence with the size of the matrix characters.

1,965,572. KEYBOARD PERFORATOR TRANSMITTER. Charles W. Burcky and Albert H. Reiber, Chicago, Ill., assignors to Teletype Corporation, Chicago, Ill., a corporation of Delaware. Application December 31, 1932. Serial No. 649,686. 18 Claims (Cl. 178 — 17.)

1. In a telegraph keyboard mechanism, electrical contacts, means for operating said contacts for the transmission of code signals, a perforator, a plurality of keylevers, a set of code bars movable transversely of their length by the keylevers upon their actuation, means common to the contacts and the perforator and operated by the code bars for effecting the operation of the contacts and perforator simultaneously, and means for permitting the separate operation of the contacts and the perforator.

1,965,596. INK FEEDER FOR PRINTING PRESSES, ETC. William Kline, Waynesboro, Va. Application August 22, 1931. Serial No. 558,769. 10 Claims. (Cl. 101 — 366.)

1. A printing press having a to-and-fro moving ink roller, an ink holder with an outlet for the discharge of ink for supplying to the press-inking means and automatic means actuated by a moving part of the press that intermittently subjects the ink in the holder to expelling pressure, the press inking means including a roller movable between the outlet and the ink roller.

1,965,734. PRINTING PRESS ROLLER SOCKET. George Ventress Chandler, Chicago, Ill. Application March 24, 1933. Serial No. 662,436. 5 Claims. (Cl. 101 — 348.)

1. In combination, in a printing press, a printing cylinder, an inking roller, a supporting bracket for the roller, the bracket embodying two members hinged together to form a bearing seat, a bearing in the seat for the roller, a portion of the bearing being eccentrically mounted between the members of the bracket, means for clamping the bracket members together to frictionally bind the eccentric portion of the bearing against rotation in the bracket, the eccentric portion being freely rotatable in the bracket when the clamping effect of the bracket members is released, to permit the roller to be moved laterally away from the cylinder, a collar carried with the eccentric portion, and cooperating means on the collar and the bracket for limiting the extent of rotation of the eccentric in the bearing, the last means embodying a fixed stop on one of the parts and spaced shoulders on the other of the parts and between which shoulders the stop operates.

1,965,747. TYPOGRAPHICAL MACHINE. Walter H. Medford, Brooklyn, N. Y., assignor to News Syndicate Co., Inc., New York, N. Y., a corporation of New York. Application September 21, 1932. Serial No. 634,116. 8 Claims. (Cl. 199 — 43.)

1. In a typographical machine having a plurality of movable magazines and a distributor bar and shift mechanism for shifting the matrices on to the distributor bar and operating mechanism for moving the magazines, locking mechanism movable independently of the operating mechanism and adapted to hold the magazines in a predetermined position, the locking mechanism being non-releasable until the shift mechanism has operated to shift the matrices on to the distributor bar.

1,965,957. SHEET FEEDER. Harry Ehlig, Pearl River, N. Y., assignor to Dexter Folder Company, New York, N. Y., a corporation of New York. Application December 1, 1931. Serial No. 578,248. 26 Claims. (Cl. 271 — 38.)

1. In a continuous sheet feeder, a suction feed member for picking up and advancing the top sheet from a fanned-out bank, a suction sheet holding member under which the raised front margin of the top sheet is advanced by the feed member, and means for breaking suction in the feed member and creating suction in the holding member to grip the margin of the sheet and temporarily stop and support the sheet from the top thereof.

1,966,061. BED AND CYLINDER PRINTING PRESS. Calvert B. Cottrell, 3d, Westerly, R. I., assignor to C. B. Cottrell & Sons Company, Westerly, R. I., a corporation of Delaware. Application December 14, 1931. Serial No. 580,863. 8 Claims. (Cl. 101 — 280.)

1. In a bed and cylinder printing press, a reciprocating form bed comprising upper and lower members, the lower member being movable in a single plane, an impression cylinder mounted on a fixed axis and having an oscillating movement through more than one revolution, means for feeding an unprinted sheet to the impression cylinder on its forward stroke, and means for taking the printed sheet tail end first from the cylinder on its reverse stroke.

1,966,121. LITHOGRAPHING PLATE CYLINDER. William Roy Hotchkiss, St. Paul, Minn. Application April 10, 1931. Serial No. 529,112. 15 Claims. (Cl. 101 — 415.1.)

4. A clamping device for lithographing plates including, bar-like jaw units, spring means for opening the jaws, studs for clamping the jaws to the ends of the lithographing plate, openings formed in the units, a cylinder for supporting the lithographing plate, studs carried by the cylinder adapted to support one of the clamping units to anchor one end of the lithographing plate, a slidable adjusting means having an equalizing nature to equalize the ends thereof, and studs carried by the slidable adjusting means adapted to engage in the openings formed in the other of the clamping units, whereby the lithographing plate may be drawn very taut about the cylinder with an equalized tension to uniformly clamp the same to the cylinder.

1,966,287. SHEET FED ROTARY PRINTING MACHINE. Hans Fischer, Augsburg, Germany, assignor to Maschinenfabrik Augsburg-Nurnberg A. G., Augsburg, Germany, a corporation of Germany. Application April 1, 1932. Serial No. 602,477. In Germany October 8, 1931. 2 Claims. (Cl. 101 — 152.)

1. In a sheet-fed multi-color rotary printing machine, in combination two printing units disposed in a row one behind the otner, each printing unit comprising an impression cylinder and a form-cylinder, a sheet feeding device for the second printing unit, members bridging the space intermediate the feeding device and the impression cylinder of the first printing unit, means on the impression cylinder of the first printing unit for passing the printed sheets over the bridging members directly into the grip of the feeding device, and drying means extending along one portion of the impression cylinders.

1,966,331. METHOD OF CONTROLLING A WEB OF FLEXIBLE MATERIAL IN A WINDING MACHINE. James A. Cameron, Brooklyn, N. Y., assignor to Cameron Machine Company, Brooklyn, N. Y., a corporation of New York. Application August 20, 1931. Serial No. 558,195. 1 Claim. (Cl. 242 — 66.)

The method of controlling a taut web of flexible material in a winding machine which consists in advancing the web toward the winding machine while subjecting the web to longitudinal tension in excess of the tension needed to wind it to prevent flapping of the side edges of the web, then reducing the longitudinal tension without rendering the web slack, and then winding the web.

1,966,393. RELIEF PRINTING MACHINE. Amos Holmes, Arthur Harold Holmes, Fred Holmes, and Amos Leslie Holmes, Birmingham, England. Application May 29, 1933. Serial No. 673,550. In Great Britain March 2, 1932. 11 Claims. (Cl. 101 — 162.)

1. In a machine for printing and embossing in relief, a substantially vertical, reciprocating die bed, means for reciprocating the die bed, a die plate carried by the die bed, a form cylinder cooperating with the die plate, means for rotating the cylinder in one direction comprising pinions on the cylinder and racks on the die bed engaging the pinions, the pinions each having a cut-away part adapted to align with the racks when the die bed reaches the end of its movement in one direction, means for supporting a roll of wiping web, a wiping plate below the cylinder, means for feeding the web over the wiping plate, means operable to impart a combined rocking and rolling motion to the wiping plate, a lug or projection on an end of the cylinder, a spring-controlled catch adapted to engage the lug when the cut-away parts of the pinions align with the racks to hold the cylinder against backward rotation only, and means for imparting an initial forward rotation to the cylinder to engage the pinions with the racks during the movement of the die bed in the opposite direction.

Modern engraving deserves these MODERN METALS

The art of photo-engraving has made splendid advances during the past ten years. Materials and methods have been greatly improved. Zomo Electric Zinc and A-Z Alloy are modern metals in keeping with the modern demand for higher quality.

These metals are melted and cast in the electric induction furnace. This insures uniformity and quick, clean etching that cannot be equalled by the old-fashioned processing. Zomo Electric Zinc is ideal for all engraving work. A-Z Alloy, a tough metal of equal etching speed, is especially made for long direct printing runs and heavy mat work.

Quick delivery of both of these metals is guaranteed from any of the following: Rolled Plate Metal Co.; National Steel & Copper Plate Co.; American Steel & Copper Plate Co.; Pacific Steel & Copper Plate Co.; C. G. Hussey & Co.; W. E. Booth Co., Ltd., Canada; Eastman Kodak Stores; Allan B. Croke Co.; Phototechnical Laboratories; Inc.

This folder gives the low-down about hardness and softness. Send for free copy.

HOW TO SIMPLIFY JOB-PRESS OPERATION WITH G-E PRESET SPEED CONTROL

SIMPLY MAIL THE COUPON

. . . and you will promptly receive this interesting description of G-E preset speed control—the new control for job presses that need be adjusted but *once* for the speed you wish during a run. After that, you can stop the press, and then start it again merely by pressing the convenient push buttons. The press promptly returns to the preset speed, without readjustment. But that's only part of the story . . . the folder tells the rest. Why not mail the coupon to-day?

GENERAL ELECTRIC

Tear Out and Mail—FOR NEW FOLDER

General Electric Company
Dept. 6B-201, Schenectady, N. Y.

Please send me Descriptive Bulletin GES-988 on your new preset-speed control.

Name.....

Company.....

Address.....

080-13

1,966,400. PAPER FEEDER. Lesley R. Tufts, Cleveland, Ohio, assignor by mesne assignments to The Cleveland Folding Machine Company, Mentor Township, Ohio, a corporation of Ohio. Application January 23, 1931. Serial No. 510,636. 9 Claims. (Cl. 192 — 126.)

1. In a paper handling machine, an endwise movable shaft having a cluten element fixed thereon, a second cluten element and a driving element secured together and loosely mounted on one end of the movable shaft, a fixed abutment for the second clutch element and the driving element, means for urging the shaft endwise to bring the clutch elements into driving relation, the means and the abutment preventing displacement of the second clutch element and the driving element longitudinally of the shaft and means for separating the clutch elements.

1,966,417. STENCILING ATTACHMENT FOR PLATEN PRESSES. Howard W. Parmele, Chicago, Ill., assignor to Naz-Dar Company, Chicago, Ill., a corporation of Illinois. Application May 31, 1932. Serial No. 614,487. 11 Claims. (Cl. 101 — 114.)

1. In a press for printing sheet stock and the like, the combination with a frame, a platen pivotally supported thereon, a bed, an inking frame supported for turning movement on the bed, means providing pivotal support for the bed on the frame, and means for periodically moving the platen and the bed about their points of pivotal support to and from printing position relative to one another, of a stencil, a stencil-supporting frame adapted to be mounted on the bed in position to register with the platen in the closed position of the press, a squeegee mounted in the frame for reciprocation over the stencil, means operatively connecting the inking frame with the squeegee, means for supplying paint to the stencil, means for periodically arresting movement of the bed away from the platen, whereby to momentarily maintain the press in closed position, and means for turning the inking frame to advance the squeegee over the face of the stencil while the latter remains in contact with the sheet to be printed.

1,966,545. MATRIX-SETTING AND TYPE-LINE-CASTING MACHINE. Julius Dorneth, Konradshohe, near Berlin-Tegel, Germany, assignor to the firm Typograph G. m. b. H., Berlin, Germany. Application March 14, 1933. Serial No. 660,734. In Germany March 21, 1932. 6 Claims. (Cl. 199 — 3.)

1. In a matrix-setting and line-casting machine the combination with matrix bars and supporting and guiding wires for conducting the bars from an upper receiving point to a lower distributing point, of movably mounted stop means in engagement with the distributing wires for stopping the movement of the matrix bars on the wires, and means for periodically raising the stop means to allow continued movement of the matrix bars.

1,966,858. PRINTING CYLINDER. Ernest William Haward, Camberwell, and Alfred Tyrell Hopkins, Orpington, Kent, England, assignors to Haward Gravure Machine Company, Limited, London, England. Application August 26, 1933. Serial No. 686,916. In Great Britain January 19, 1932. 7 Claims. (Cl. 101 — 157.)

1. In intaglio printing machines, a longitudinally gapped printing cylinder and a gap plate or cover for bridging the longitudinal edges of the cylinder gap and closing the gap, the longitudinal edge portion of the gap plate at the forward junction, considered in the direction of rotation of the cylinder, being elevated above the surface of the cylinder forward of the line of junction, and the longitudinal edge portion of the cylinder at the second line of junction being elevated above the surface of the gap plate or cover forward of the line of junction so that adjacent the lines of junction longitudinal ridges are presented to bear against the under side of a doctor blade applied to the cylinder to relieve the pressure of the blade on the surface over which it is traveling as it passes over the lines of junction.

1,966,900. SHEET FEEDING DEVICE. John H. McElroy, Pearl River, N. Y., assignor to Dexter Folder Company, New York, N. Y., a corporation of New York. Application July 22, 1929. Serial No. 380,078. 69 Claims. (Cl. 271 — 31.)

1. In a pile feeder, spaced side frames, an elevator supported on and between the side frames, tracks extending between the side frames at the bottom of the elevator, a pile board movable into the feeder between the side frames and along the tracks, and cross members secured to the pile board and having grooves adapted to engage the tracks and notched ends adapted to engage flights of the elevator.

1,967,056. WEB SUPPLY MECHANISM FOR PRINTING MACHINES. Albert J Horton, White Plains, N. Y., assignor to R. Hoe & Co., Inc., New York, N. Y., a corporation of New York, Irving Trust Company, receiver. Application January 15, 1932. Serial No. 586,798. 16 Claims. (Cl. 242 — 58.)

1. In a web supply mechanism for a machine operating upon a web, a rotatable support for a plurality of web rolls, a traction member adapted to rotate a web roll to accelerate it to the speed of a running web, and means acting with maximum force at the moment of application, to press the traction member firmly against the roll with which it is engaged when the machine is decelerated rapidly.

1,967,194. TYPE JUSTIFYING MEANS. John Q. Sherman, Dayton, Ohio. Application February 5, 1931. Serial No. 513,737. 15 Claims. (Cl. 101 — 403.)

1. A series of printing type arranged in a line including at least two type, one of which has a laterally extending integral spacer and engageable with the adjacent type body to relatively separate the type bodies in a line of set type, the engaged body having depressions in the engaged face thereof of somewhat less dimensions than the engaging spacer, into which the spacer normally projects, and into which it may be forced more deeply by pressure to proportionately shorten a line of set type.

19,254 — REISSUE — DELIVERY MECHANISM FOR PRINTING PRESSES. Frank E. Rich, Chicago, and Fred C. Burdick, La Grange, Ill., assignors to The Miehle Printing Press and Manufacturing Company, Chicago, Ill., a corporation of Illinois. Original No. 1,663,815, dated March 27, 1928, Serial No. 60,031, October 2, 1925. Application for reissue March 26, 1930. Serial No. 439,231. 16 Claims. (Cl. 271 — 84.)

1. In combination with the other elements of a press or the like, a reciprocating delivery frame, means to deliver sheets to the reciprocating frame, stop means carried by the frame and adapted to retain sheets thereon, means adapted to move the stop means to release the sheets at a predetermined point in the operation, and means adapted selectively to prevent release by the stop means.

1,967,569. PRINTING. John Elton Cole, Wilmington, Del., assignor to E. I. du Pont de Nemours & Company, Wilmington, Del., a corporation of Delaware. No Drawing. Application January 25, 1933. Serial No. 653,548. 19 Claims. (Cl. 8 — 6.)

1. A dye paste comprising a water insoluble vat dye and a compound selected from the group consisting of formates and substances capable of yielding formates under the conditions of printing.

1,967,634. PRINTING PRESS FORMER CONSTRUCTION. Isidor Tornberg, Plainfield, N. J., assignor to Wood Newspaper Machinery Corporation, New York, N. Y., a corporation of Virginia. Application September 30, 1930. Serial No. 485,342. Renewed January 8, 1934. 9 Claims. (Cl. 270 — 8.)

1. In a printing machine, the combination with a drag roll and a double former, of an extra former located at one side of the double former and in horizontal alignment therewith and in position to receive the web from another press over the same drag roll.

1,967,635. MEANS FOR SUPPLYING PRINTING PRESSES WITH SPECIAL PAPER. Isidor Tornberg, Plainfield, N. J., assignor to Wood Newspaper Machinery Corporation, New York, N. Y., a corporation of Virginia. Application February 21, 1931. Serial No. 517,467. Renewed January 5, 1934. 5 Claims. (Cl. 270 — 18.)

2. The combination with a printing press comprising a plurality of units and means for supplying a full width web thereto, of means movable along the press longitudinally for supplying a narrower web to any desired unit of the press.

1,967,647. MEANS FOR SUPPORTING WEB ROLLS AND THE LIKE. Henry A. Wise Wood, New York, N. Y., assignor to Wood Newspaper Machinery Corporation, New York, N. Y., a corporation of Virginia. Application March 18, 1932. Serial No. 599,720. 5 Claims. (Cl. 242 — 64.)

1. In a movable support for a plurality of web rolls, the combination of a plurality of pairs of arms, each arm having means for centering and supporting one end of a web roll, the arms being movably mounted on the movable support, and means carried by the sup-

port for moving each pair of arms individually for the purpose of locating them in position to pick up a new web roll.

1,967,648. MAGAZINE REEL. Henry A. Wise Wood, New York, N. Y., assignor to Wood Newspaper Machinery Corporation, New York, N. Y., a corporation of Virginia. Application June 3, 1932. Serial No. 615,087. 5 Claims. (Cl. 242 — 64.)

1. As an article of manufacture, a magazine reel having a central member and spiders thereon for carrying three web rolls, the central member being shaped to substantially fill the space between the three web rolls when they are all in position on the spiders and of full size.

1,967,892. STROBOSCOPE. Joseph K. Leibing, Scotia, N. Y., assignor to General Electric Company, a corporation of New York. Application February 1, 1933. Serial No. 654,685. 21 Claims. (Cl. 175 — 183.)

1. A stroboscope comprising a non-transparent casing, a spindle rotatably mounted in the casing, a rotatable disc within the casing driven by the spindle, means for periodically projecting a column of light into the casing which impinges on the disc, the casing and disc being provided with means for effecting the passage of a beam of light from the column of light out of the casing each time a column of light is projected thereinto, with this beam of light moving over the arc of a circle in synchronism with the rotation of the disc as it emerges from the casing during the period a column of light is impinging on the disc, and means for varying the frequency at which the column of light is projected into the casing.

1,968,001. TYPOGRAPHICAL MACHINE. Henry Borrmann, Brooklyn, N. Y., assignor to Intertype Corporation, Brooklyn, N. Y., a corporation of New York. Application January 2, 1934. Serial No. 704,974. 9 Claims. (Cl. 199 — 44.)

1. In a typographical machine having a keyboard the keys of which are grouped to correspond with complemental groups of matrices comprising a font, a plurality of magazines of relatively different forms to contain individual groups of matrices corresponding respectively with the groups of keyboard keys and capable of assembly for control of the delivery of matrices therefrom, respectively, by the corresponding groups of keyboard keys, one or another of the magazines being individually exchangeable with another magazine of similar form containing a corresponding group of matrices of another font.

1,968,166. ROTARY PRINTING PRESS. Thomas Ewart Phythian, Headingley, Leeds, and Charles Henry Crabtree, Leeds, England. Application December 23, 1932. Serial No. 648,658. In Great Britain July 31, 1931. 10 Claims. (Cl. 101 — 351.)

1. In rotary web-printing presses having a web braking device, a braking device for the web supply roll and a device for interrupting the action of the inking mechanism, control mechanism comprising a plurality of electrical contact devices distributed along the path of the web, the contacts of which devices are maintained apart by the web, a source of current, and an electric relay connected in a circuit which is closed by way of one of the contact devices, the electric relay comprising a contact closing member responsive to energization of the relay, contacts closed by the contact closing member, a source of current, electromagnetic control devices in circuit with the contacts and the source of current and elements responsive to the electro-magnetic control devices determining the operation of the web braking, web roll braking and inking mechanism interrupter devices.

1,968,453. WEB ROLL CONTROLLING DEVICE FOR PRINTING MACHINES. Albert J. Horton, White Plains, N. Y., assignor to R. Hoe & Co., Inc., New York, N. Y., a corporation of New York; Irving Trust Company, receiver. Original application April 27, 1929. Serial No. 358,481, now Patent No. 1,881,589, dated October 11, 1932. Divided and this application September 5, 1931. Serial No. 561,379. 10 Claims. (Cl. 242 — 75.)

2. In a web feeding device, a roller bearing against the web, arms adapted to rotatably support the roller, a rotatably supported shaft to which one of the arms is secured, and means for turning another of the arms with respect to the shaft and without disconnecting it therefrom to position the axis of the roller out of or into a plane common to the axis of the roller and the shaft.

1,968,550. RUBBER ROLLER GRINDING MACHINE. Leslie W. Barnes, Trumbull, Conn., assignor to The Black Rock Manufacturing Company, Bridgeport, Conn., a corporation of Connecticut. Application May 28, 1930. Serial No. 456,613. 3 Claims. (Cl. 51 — 49.)

2. In a roller grinding machine, a bed, means for supporting a roller thereon to be ground, means for rotating the roller, a reciprocatory carriage mounted on the bed, means for feeding the carriage horizontally of the bed, an electric motor, grinding wheels of different diameters mounted on opposite end portions of the motor spindle, means for adjusting the motor and its spindles to position the two grinding wheels to operate simultaneously against the top side and at an angle to the axis of the roller to provide two different cutting speeds on the surface of the roller.

1,968,980. ROTARY STEEL PLATE PRINTING MACHINE. Peter Aitchison, New Rochelle, N. Y., assignor to American Bank Note Company, New York, N. Y., a corporation of New York. Application March 15, 1932. Serial No. 598,899. 18 Claims. (Cl. 101 — 156.)

1. A rotary steel plate printing machine, embodying therein a plate cylinder, and a wiping mechanism embodying a support for a supply roll of a continuous web of wiping material, a support for a rewind reel, a platen rotatable about an axis substantially parallel with the axis of the plate cylinder, whereby a wiping web may be passed from the supply roll about the platen and to the rewind reel, means whereby the web passing the platen is maintained in engaging relation with a plate upon the cylinder, means imparting continuous rotary movement to the platen in the same direction as, but at a relatively lower speed than, the plate, and a rewind mechanism adjacent the support for the rewind reel.

1,969,049. FOLDING MACHINE. Georg Spiess, Leipzig, Germany. Application March 31, 1932. Serial No. 602,203. In Germany July 21, 1931. 4 Claims. (Cl. 270 — 68.)

1. In a folding machine, a roller comprising in combination: a core, and an outer shell composed of printers' roller composition cast around the core.

1,969,155. DAMPENING MECHANISM FOR LITHOGRAPHIC OFFSET PRESSES AND THE LIKE. Joseph Schultz, Cleveland, Ohio. Application January 7, 1931. Serial No. 507,096. 37 Claims. (Cl. 101 — 148.)

1. In a lithographic press, a printing plate movably mounted on the press, means adapted to feed a uniform coat of liquid to the plate, and an element adapted to feed additional liquid to a portion of the plate, the element comprising means for regulating the amount of additional liquid delivered and being shiftable in a direction transversely of the movement of the plate.

1,969,480. WEB CUTTING MECHANISM. Clifford L. Shipley, Chicago, Ill., assignor to R. Hoe & Co., Inc., New York, N. Y., a corporation of New York; Irving Trust Company, receiver in equity of said R. Hoe & Co., Inc. Application November 18, 1931. Serial No. 575,730. 5 Claims. (Cl. 270 — 50.)

1. In a cutting and folding mechanism for a printing machine, a folding cylinder having a cutting abutment and sheet taking pins, a cutting cylinder having a cutting box and sheet taking pins operable to form a collected product: the cutting box including a cutting knife, a yieldingly supported externally protruding cheek-block on the leading side of the knife, and a rigidly supported fixed cheek-block on the lagging side of the knife, the fixed cheek-block having its outer edge in non-projecting relation to the periphery of the cutting cylinder.

1,969,569. METHOD OF MAKING PRINTED CELLOPHANE. Francis X. Malocsay, Upper Saddle River, N. J., assignor, by mesne assignments, to Consolidated International Corporation, a corporation of New York. Application June 21, 1932. Serial No. 618,452. 2 Claims. (Cl. 41 — 22.)

2. The method of making printed "Cellophane" consisting in printing a design with an adhesive substance on one side of a "Cellophane" sheet, applying printing powder over the design and removing surplus powder from the sheet, coating both faces of the sheet with a thin, transparent waterproofing compound to form a film over the printing, and printing design elements complementary to those first printed, on the opposite side of the sheet and on top of the waterproofing compound.

Continued on page 28

BURGESS CHROME MATS

Stereotypers Watch—

STEREOTYPERS must constantly watch *costs* and *appearance*—two things that don't go together easily.

Burgess Chrome Mats were developed by us to do both. And each month more and more Stereotype Rooms are finding it out—and adopting Burgess Chrome Mats as standard.

They are learning that:

Burgess Chrome Mats shrink uniformly. Burgess Chrome Mats turn out better plates, assuring a better printed paper with less ink and less impression upon press blankets.

Burgess Chrome Mats show less lengthwise shrinkage in relation to cross-wise shrinkage saving lost advertising lineage.

And Burgess Chrome Mats cast at the lowest temperature that the metal formula and casting conditions permit.

These are the qualities of the mats—but the job of the Burgess Man who calls on you is not to sell you these mats. Burgess Chrome Mats sell themselves. He is trained to help you with your mat problems—regardless of what make mats you use.

Don't hesitate to call him in. There is no obligation. And if you watch costs and appearance his visit will be worth while to you.

BURGESS CELLULOSE COMPANY
FREEPORT, ILLINOIS

CHROME MATS
A Laboratory Product
A 183

Pacific Coast Representative, RALPH LEBER,
426 Polson Bldg., Seattle, Washington

BURGESS CHROME MATS

BURGESS CHROME MATS

BURGESS CHROME MATS

85% of all Display above 18 point is LUDLOW Set

The Ludlow has certainly proved its value in the composing room of the Tulsa Tribune. 85% of all display above 18 point is Ludlow set. The balance is keyboard display except for a few large faces not available on the Ludlow.

All news streamers are Ludlow set and stand up wonderfully under the dry mat system. Ludlow upkeep cost is ridiculously low year in and year out.

After operating every display system, I have come to the conclusion that the type-casting machine for newspaper display faces is undoubtedly the Ludlow.

A. D. MacDIARMID
Superintendent, TULSA TRIBUNE

Ludlow Typograph Co.
2032 Clybourn Avenue, Chicago, Ill.

Set in Tempo Medium and Tempo Bold Condensed

. . New Mechanisms

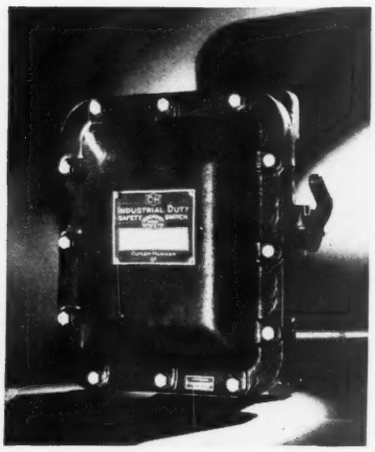
(Continued from page 11)

When adjusting rollers, all of the form rollers are removed from the press except the one which is to be adjusted. After making the adjustment, each roller in turn is replaced in its bearing after the adjusted roller has been removed.

In setting rollers on the ink plate without a gauge of some kind, pressmen frequently lower the journal box (or bearings) so that the ink plate will support the roller. If this condition exists, the rollers will drop down upon leaving the ink plate and will strike the form in the same manner. This causes filling in of type as well as streaking and filling-in of halftones.

The gauge blocks are made of a light and durable die-cast alloy which insures uniformity and greater accuracy. A felt case is provided in which each pair of gauges may be kept. Further particulars may be obtained from Mr. Memmler at the address given above.

New Explosion Proof Safety Switch



Tightly enclosed edge confines any flame within the case.

A new line of explosion proof safety switches for use in hazardous locations is announced by Cutler-Hammer, Inc., Milwaukee, Wis. This new line includes both single throw (Bulletin 4104) and double throw (Bulletin 4124) types, in standard sizes up to 200 amp. capacity. The switch is a heavy, industrial duty Type A construction, with outside operating handle, mounted in a heavy weather-proof, semi-steel cast enclosure, complying in every respect with requirements of the National Electrical Code. A precision machined flange of required width, between the case and cover, assures proper cooling of any flame which might occur from an explosion within the case, so that outside gases will not ignite. Corrosion resisting bolts hold the cover firmly in place.

Two pipe threaded conduit holes are provided in the bottom of the case and pads at the side and top of the case allow for drilling other holes if needed. Provisions are made for padlocking the handle in either position.

A Slide Rule for Printers

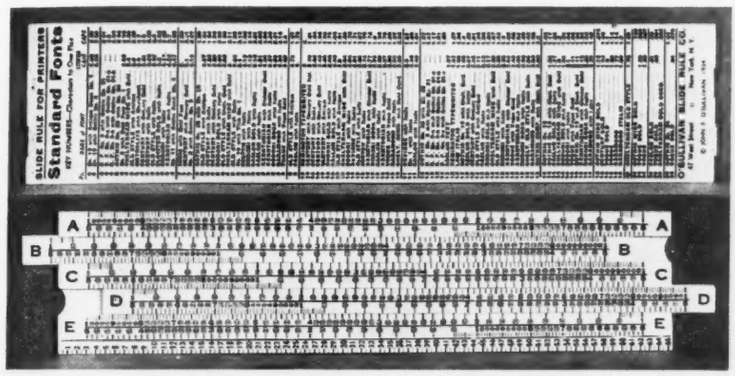
John F. O'Sullivan of New York, New York, has designed and placed on the market a Slide Rule for Printers, a mechanical instrument for multiplying and dividing. The Slide Rule is substantial in form and is simple in operation. Its settings and readings are made with ease and rapidity. It eliminates chances of error, enabling the user to avoid unnecessary motions. Calculations are performed mechanically, without the need of pencil or paper. The knotty points of computation and calculation are visualized by the user, and he soon observes improvement in solving various problems.

A mathematical instrument is a powerful tool when used in performing the computational work of the printer as it encourages further study in mathematics—the language of science. A complete Manual of Instructions accompanies each Slide Rule and illustrates the methods for applying the

various scales to a wide range of practical problems, enabling printers to find missing information. As they are completed from time to time by Mr. O'Sullivan, additional pages of the Manual will be mailed gratis to users of the Slide Rule.

The following features will be found in the O'Sullivan Slide Rule for Printers: (1) Direct reading in encircled figures, to cover from 1 to 100. Also the halving of the same figures, to cover from 1 to 100; (2) Duplex sliding scales that can be used in making a combination of three or more factors at each setting, with combined multiplication and division; (3) A tabulated list of standard type faces, from 5 to 36-pt. with key numbers (number of characters to 1 pica) of both caps and lower case, and (4) A pica scale for computing the number of picas and nonpareils in width and depth of a job.

The Slide Rule for Printers is supplied by O'Sullivan Linotype Composition Co., 47 West Street, New York, N. Y.



Keyboard Cam Rubber Roll

The E. A. Booth Rubber Company, 364 Rockefeller Bldg., Cleveland, Ohio, has placed on the market a rubber roll for use in line-composing machine keyboards. The rolls are colored green.

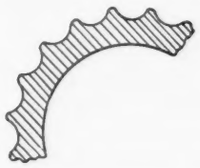


Diagram of enlarged section of Booth keyboard rubber roll for line-composing machines to show corrugations in the roll tread.

In commenting on the rolls, E. A. Booth, president of the company said:

"We had a great many calls for a rubber roll which would be dependable and we feel that we are now furnishing a roll which will function satisfactorily under conditions where an ordinary roll would fail. Booth keyboard rolls are furnished with either corrugated or plain tread at the option of the user. The corrugated rolls, however, present a new conception of tread for keyboard cams. The corrugations assure engagement of the cam teeth but the spaces between are not deep enough to permit the corrugations to 'bottom' between the teeth of the cam. Conditions in many composing rooms make it desirable that a corrugated roll be used which will insure positive response when the cam strikes the revolving roll.

"As will be seen in the diagram, the corrugations are so spaced as to correspond to the spacing of the teeth in the periphery of the cam. The teeth are rounded to resist any cutting or 'chewing' action of

Continued on page 30

EDES PHOTO-ENGRAVING

EDES SUPERFINE QUALITY ZINC

ZINC

THE STANDARD FOR MORE THAN 80 YEARS

THE EDES MANUFACTURING CO., PLYMOUTH, MASS.

There is a lot of "know how" in every sheet

Sales Representatives

John H. Heimbuecher Metals Co., 514 No. Third St., St. Louis, Mo.
Gazzolo Drug & Chemical Co., 119 So. Green St., Chicago, Ill.
E. H. Walker Supply Co., Printcraft Bldg., Washington, D. C.
R. Mohr & Sons, 883 Mission St., San Francisco, Cal.
Thompson-Hayward Chemical Co., 2228 Blake St., Denver, Colo.
Thompson-Hayward Chemical Co., 909-2nd St. So., Minneapolis, Minn.
Metzger Photo Supply Co., 1091 So. Main St., Akron, Ohio
G. C. Dom Supply Co., 125 East Pearl St., Cincinnati, Ohio

Don't Burden Your Payroll with Obsoleteness

Let the old-fashioned, time-killing, money-wasting method of cleaning mats and magazines (by hand) go the way of the wet mat and other antiquated customs.

Adopt the "KLEAN-O-MAT" Process—NOW—the process that does the job in 30 minutes (*without running mats out*); gives operators real visibility; greatly reduces errors, and cuts production costs.

Then—you'll understand why R. Marvin Megginson (Supt. Wilmington, Del., "News-Journal"), says: *"I consider the old way of running mats out as obsolete as 'beating in' a wet mat with the old-fashioned brush."*

"Results highly satisfactory . . . machinist enthusiastic . . . found no injury to mats, magazines or cams . . . false-walls not touched . . . consider good investment." — "Washington Daily News," Washington, D. C.

" . . . want to tell you that I am well pleased with results obtained." — Altoona (Pa.) "Mirror."

" . . . more than pleased . . . reduced errors more than 50% . . . machinist very enthusiastic . . . operators amazed and pleased with elimination of errors and transpositions and relief from eye-strain." — Hamilton (Canada) "Spectator."

" . . . performs well work for which intended . . . consider useful and valuable."—Jamestown (N. Y.) "Journal."

Klean-O-Mat "Clicked" at St. Louis Conference

Mechanical executives who attended the A.N.P.A. Conference at St. Louis, June 4, 5, 6, as well as the State Conference at Moline, Ill., and Clinton, Iowa, demonstrated keen interest in "KLEAN-O-MAT" displays and were unanimous in declaring "KLEAN-O-MAT" to be *right*. Let us send you a comparative cost analysis hat will surprise you.

KLEAN-O-MAT DIVISION,
THE FRED GOAT CO., INC.
ESTABLISHED 1893

Klean-o-Mat
REG. U.S. PAT. OFF.
PROCESS

314 DEAN STREET • BROOKLYN, N. Y.

. . Patents

(Continued from page 25)

1,969,635. MATRIX-COMPOSING AND LINE-CASTING MACHINE. Christian Augustus Albrecht, Berlin, Germany, assignor to Mergenthaler Linotype Company, Brooklyn, N. Y., a company of New York. Application January 19, 1933. Serial No. 652,459. In Germany February 4, 1932. 4 Claims. (Cl. 199 — 27.)

1. Matrix-composing and line-casting machine in which the matrices released from the magazine are guided towards a point below the center of the magazine by means of two assembler belts from which they are delivered into the assembler, characterized by the fact that the conveyance of the matrices from the assembler belts to the assembler is effected by means of a third assembler belt distinct from the other two belts and which is driven at a speed less than that of the two assembler belts.

1,969,662. TYPOGRAPHICAL CASTING MACHINE. Gustave Rapprich, West New York, N. J., assignor to Mergenthaler Linotype Company, a corporation of New York. Application February 25, 1932. Serial No. 595,016. 50 Claims. (Cl. 199 — 47.)

1. In a slug-casting machine, the combination of a transporter for presenting a composed line to the mold, an assembler wherein the line is composed, means for transferring the composed line from the assembler to the transporter, and automatic means for locking the line transfer means against action until the machine nas completed several cycles of operation, the locking means acting directly on the transfer means and independently of the assembler.

1,969,663. SLUG-CASTING MACHINE. Gustave Rapprich, West New York, N. J., assignor to Mergenthaler Linotype Company, a corporation of New York. Application May 12, 1932. Serial No. 610,756. 18 Claims. (Cl. 199 — 50.)

1. In a slug-casting machine, the combination of a pair of line clamping members, means for delivering a composed line to the clamping members, and means actuated by the delivery at different casting levels of an overset or tight line to the clamping members for lessening the space between tnem so as tnereby to prevent their reception of the line.

19,269. TYPE BINDING MEANS. Laurence A. Costigan, Philadelphia, Pa. Original No. 1,932,336, dated October 24, 1933, Serial No 647,438, December 15, 1932. Application for reissue May 10, 1934, Serial No. 725,005. 3 Claims. (Cl. 276 — 40.)

1. As a new article of manufacture, a binding tape holder comprising a substantially L-shaped device embodying right-angularly disposed bars, the inner faces of said bars being formed with relatively narrow tape seating grooves, said grooves corresponding in width to the width of the tape, and resilient retaining clips carried by said bars and depending into the upper edge portions of said grooves for releasable engagement with the tape.

1,969,942. INK DISTRIBUTING MECHANISM FOR PRINTING MACHINES. Thomas Ewart Phythian, Headingley, Leeds, England. Application September 24, 1931, Serial No. 564,864. In Great Britain October 22, 1930. 4 Claims. (Cl. 101 — 349.)

1. Ink distributing mechanism for printing machines, comprising a rotatable ink distributing drum, a plurality of ink distributing rollers cooperating with the said drum, a pair of rotatable cams coaxial with but separate from the said drum, the said cams directly engaging and reciprocating the distributing rollers in groups and being positioned with a relative angular displacement determined by the distance apart of adjacent distributing rollers so that the adjacent distributing rollers are reciprocated in opposite directions from different cams throughout the movement of rotation of tne drums, and means for effecting a differential movement of the cams with respect to the drum.

1,969,946. FEED TABLE FOR SHEET FEEDING MECHANISM. Charles F. Root Cleveland, Ohio, assignor to The Chandler & Price Company, Cleveland, Ohio, a corporation of Ohio. Application June 16, 1931, Serial No. 544,754. 15 Claims. (Cl. 271 — 62.)

1. In mechanism of the character described, a feed-table, endless conveyor means for forwarding stacks of sheets thereover, stack panel-boards, blocks securable to said boards, and means permitting adjusting the position of said blocks, said means including slot-ways carried by the separator panel, and bolts in such slot-ways for setting the position of the blocks.

1, 970,049. RESTORING CONVEYER CHAIN FOR THE PATRICES OF TYPE LINE SETTING MACHINES. Paul Marti, Winterthur, Switzerland, assignor to firm Schweiz. Lokomotiv & Maschinenfabrik, Winterthur, Switzerland. Application August 8, 1933, Serial No. 684,246. In Germany August 16, 1932. 3 Claims. (Cl. 199 — 35.)

1. In a conveyer chain for restoring circulating type carrying patrices having restoring dentures in type setting and printing machines, in combination, a restoring rail along which the patrices are moved secured to the machine frame, a conveyer chain cooperating with said rail for moving the patrices along the rail, said chain having link elements provided with notches the thickness of the patrices, said notches receiving the patrices, said elements having extensions adjacent said notches forming downwardly extending abutment arms to engage the patrices.

1,970,101. STAPLING MACHINE OR TACKER. Arthur H. Maynard, Warwick, R. I., assignor to Boston Wire Stitcher Company, Portland, Maine, a corporation of Maine. Application January 17, 1931, Serial No. 509,409. 29 Claims. (Cl. 1 — 49.)

1. In a stapling-device, the combination of a magazine for holding a supply of staples, a staple-driver, a staple-carrier, means for feeding a staple from the magazine to the staple-carrier, means for effecting relative movement between the driver and carrier, and means carried by the carrier and movable in relation thereto for positioning the staple carried thereby to adapt it to be driven by the driver.

1,970,235. SHEET HANDLING MECHANISM. Arthur G. Jacobson, Chicago, Ill., assignor to The Miehle Printing Press & Mfg. Company, Chicago, Ill., a corporation of Illinois. Application October 13, 1930, Serial No. 488,273. 12 Claims. (Cl. 271 — 68.)

1. In sheet handling mechanism, the combination of movably mounted sheet supporting means, endless sheet conveying means adapted to deposit printed sheets onto said supporting means, and means for controlling the operation of said conveying means by said supporting means.

1,970,352. WEB FEEDING DEVICE. Otto Wohlrabe, Plauen, Germany, assignor, by mesne assignments, to The Bell Punch and Printing Company Limited, Uxbridge, England, a British joint-stock company. Application May 23, 1929, Serial No. 365,353. In Germany June 13, 1928. 11 Claims. (Cl. 271 — 2.6.)

1. Apparatus for use with a high speed printing press, in which a web having preprinted matter disposed at regular intervals along the length is fed, comprising a rotatable drum, means for entraining said web about a substantial portion of the curved periphery of the drum, mechanism for detecting and correcting improper registration of said web and said drum, said mechanism including an impulse transmitting means comprising a flexible band disposed on the opposite side of that portion of the web extending about the drum, and effective over a substantial portion of the drum periphery, means carried by said drum for receiving the impulse, said web being provided at spaced intervals with portions pervious to such impulses, whereby the shifting of the web upon the drum affects the transmission of impulses therethrough to control mechanism by such impulses for regulating the feeding of the web.

1,970,356. ROTARY PRINTING PRESS. Horace Drummond Black, Uxbridge, England, assignor to Bell Punch Company Limited, Uxbridge, England. Application June 14, 1930, Serial No. 461,166. In Great Britain July 17, 1929. 21 Claims. (Cl. 271 — 2.6.)

1. A mechanism of the kind described which comprises means operable to feed continuously a preprinted inset web of material having a series of successive registration indications disposed at regular intervals along the length thereof, a conveyor arranged to engage and travel with the web for a substantial distance at the surface speed thereof and provided with registering means within which the successive registration indications are normally arranged to register, detector mechanism actuated solely mechanically responsive to relative displacement between the registration indications of the web and the registering means of the conveyor, a correcting mechanism for the web operable automatically to correct such displacement, and an operative connection between said detector mechanism and said correcting mechanism, said operative connection including a slow moving element, whereby an initiation of an actuation of said correction mechanism is effected gradually during a substantial portion of said substantial distance of movement of the conveyor.

1,970,491. PRINTING PRESS. Curtis S. Crafts, Oak Park, Ill., assignor to The Goss Printing Press Co., Chicago, Ill., a corporation of Illinois. Application July 10, 1931, Serial No. 549,950. 5 Claims. (Cl. 270—5.)

1. In a printing press, the combination of a frame, a plurality of press units mounted on said frame in alignment with each other therealong, a folder unit mounted on said frame in alignment with said press units, individual motors for the several units located below the units with their drive shafts in alignment with each other, auxiliary shafts between each two adjacent motor shafts and in alignment with said motor shafts, a supporting bearing for each of said auxiliary shafts at each end portion thereof, couplings between each of said auxiliary shafts and the motor shaft at one end thereof, clutches for connecting each of said auxiliary shafts with the motor shaft at the opposite end, and endless belt driving connections extending downwardly from each of said units and connected at its lower end portion with one of said auxiliary shafts.

1,970,527. QUADDING AND CENTERING DEVICE FOR TYPOGRAPHICAL MACHINES. Samuel E. Sperry, Hollis, N. Y., assignor to Intertype Corporation, Brooklyn, N. Y., a corporation of New York. Application May 19, 1932, Serial No. 612,349. 30 Claims. (Cl. 199—50.)

1. In a line composing and type casting machine having a vise embodying opposed jaws adapted to be set to receive full length matrix lines between them, at least one of said jaws being movable toward the other jaw to close against a short length matrix line, locking means for said movable jaw having means for normally holding it in inactive relation therewith, and means operative to actuate said locking means to release it from its holding means for movement into active relation with said movable jaw and cause it to act on said jaw to force it from short line closing position toward the othe jaw to clamp and lock such short length matrix line endwise.

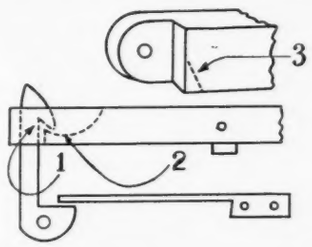
Not To Be Found In The Adjustment Book

Among the minor items connected with line-casting machine maintenance is the relation of the assembling elevator latch release and the passage of the last matrix of a line into the delivery channel, either on a waiting line or one which is sent over while the machine is standing at normal position.

If the latch does not fully support the assembling elevator until the matrix line is fully within the delivery channel, the prematurely released elevator will annoy the average operator because he will find it necessary to interrupt production in order to pick up the spilled matrices and spacebands. Of course, an operator *can* hold up the elevator manually but it is not intended that he do so. If it were part of the machinist's duties to pick up scattered matrices and spacebands from the floor in cases like this, no doubt all the machines under his supervision would soon be placed in proper condition.

In some cases, due to lost motion in the delivery slide lever and parts after considerable use, the delivery slide trailer may push the latch *1* from its support *2* in the stop bar before the last matrix in a line has entered the delivery channel. In this case (providing the split lever adjustment is in proper condition) a small section, indicated at *3*, in the delivery slide trailer bar may be cut off to retard release of the latch.

The assembling elevator latch hook *1* engages a lug *2* which is milled in the back left side of the stop bar. In the course of time this lug will become rounded off at the top corner and



will no longer support the elevator. This is caused by the wearing action of the latch upon the stop bar lug when the delivery slide trailer releases the latch. In case a slot has not been cut in the stop bar to separate the lug from the bar body, a hack saw may be used to do the slotting. While the stop bar is mounted between the jaws of a strong bench vise, the lug *2* may be driven upwardly a slight amount by means of a hammer and punch. It may be necessary to chisel away a small amount of stock back of the point which is engaged by the latch to remove the rounded corner.

Sometimes it is necessary to file out the latch hook as shown at *1*. If the latch is too hard to file it may be annealed and shaped. In order to harden the latch point again, heat to a cherry red and dip the point only in water.

CORK MOLDERS

A BLANKET FOR EVERY USE

SUPERIOR (Hard)
METROPOLITAN (Medium)
SYNDICATE SPECIAL (Extra Thick)
ECONOMIC (Soft)
STANDARD (Extra Soft)

Especially designed for dry mat molding with exact density to give proper molding depth and insure perfect plates. No fractured mat surfaces. No broken type. After years of experimenting, we offer cork blankets to meet the exact requirements of every dry matrix. Adaptable and durable, these blankets will show molding improvement in your plant.

American Publishers Supply • P.O. Box 131 • W. Lynn, Mass.

. . New Mechanisms

(Continued from page 27)

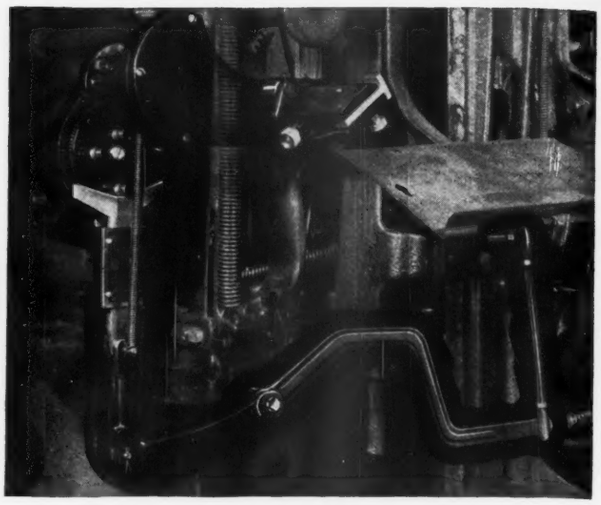
the cam which sometimes occurred with the older style corrugated roll."

New Improved Automatic Ejector Set

Announcement was made some time ago that the Mergenthaler Linotype Co., had been appointed sales agents for the new improved Automatic Ejector Set made by The Time Savings Device Co., Warren, Ohio.

The device is applied between the mold turning pinion arm and the base of the Linotype. As the operator pulls the mold turning pinion forward to change molds it engages in a gear on the Automatic Ejector Set which through shaft and gears revolves the index gear, upon the face of which are mounted four rollers, which are set to conform to the four molds in the mold disk. By means of a slide and links the ejector is caused to change at the same time the mold is being changed.

When liner changes are made, the roller on the face of the index gear is changed by merely pulling the spring pin out and placing it in the desired setting. Another feature of the device is an attachment that prevents the mold disk from getting out of synchronization with the mold-turning pinion when the mold disk is pulled forward for any purpose.



Further information can be obtained from the Mergenthaler Linotype Co. or the Time Saving Device Co., Inc., 599 Kenmore Ave., S. E., Warren, Ohio.

The Picture Story of "Wood Dry Mats in the Making," No. 8

Nine Years is Average Experience In Our Calipering Department

THE gauges used in calipering Wood Dry Mats are delicate instruments and, unless operated by efficient workmen, variations in thickness may arise. The inspecting and calipering processes require considerable time and must be performed with the greatest of care. Our workmen in this department have an average of nine years' experience at the same task. Every Wood Dry Mat is handled individually by these men whose sole objective is to caliper and sort according to thickness and discard mats showing imperfections.

WOOD FLONG CORPORATION
Hoosick Falls, New York

WOOD DRY MATS
ALWAYS UNIFORM

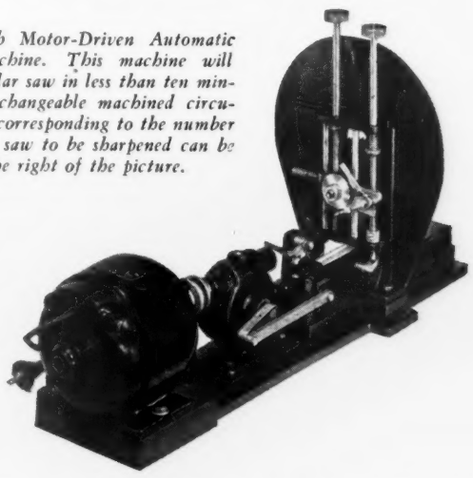
Tesch Motor Driven Saw Filer

It has been announced that the Tesch Manufacturing Company, 2850 South 20th St., Milwaukee, Wis., is making a motor-driven saw-filing machine for sharpening engravers', stereotypers', electrotypers' and composing room saws.

The base of this new machine is 7½ in. by 29 in. Total height of the machine is 16 in. Weight is 65 lbs. It will file circular saws from the smaller trimmer sizes up to 11 in. diam. A motor will be furnished which is suitable to the electrical requirements of the plant in which the installation is to be made. A convenient plug is furnished.

A worm-driven speed reducer provides a filing speed of 72 strokes per minute. The time required for sharpening a saw is less than 10 min. An accurately machined index plate is used to regulate the saw tooth spacing and control the filing operation. Three sizes of plates are furnished with each machine as regular equipment.

With the Tesch motor-driven saw-filing machine it is claimed that exact uniformity of saw teeth and a true cutting circle may be obtained. Saws can be retoothed and new saws made with any desired number of exactly spaced teeth. A



View of Tesch Motor-Driven Automatic Saw-Filing Machine. This machine will sharpen a circular saw in less than ten minutes. An interchangeable machined circular index plate corresponding to the number of teeth in the saw to be sharpened can be seen at the right of the picture.

6-in. standard three cornered, tapered file is fitted into the file bushing in required position, on the traveling file carriage. The saw to be filed and an Index Plate of the same number of teeth are locked on to the arbor which is then lowered by thumb screw to the file, which is adjusted with set screws to the angle and pitch desired. Another thumb screw adjusts the pawl to index plate for the correct spacing of teeth. As the machine is fully automatic, it needs no further attention and after being set will file until all teeth are uniform and true in radius as well as distance from center. This is obtained through the index plate mentioned above.

New Front Mold Wiper

The Linotype Parts Corporation, 203 Lafayette St., New York, New York, has announced a new front mold wiper felt for application to linotypes and intertypes. The wiping element consists of a piece of felt of the proper thickness which is slidably mounted in a slotted recess in the upper portion of the wiper bracket. There is enough friction to hold the felt in position but for those who feel that the felt must be anchored, a keeper is inserted in a hole and through the felt at the outer end of the bracket.

In addition to the manner in which the felt is mounted, a new feature consists of an adjusting screw at the lower end of the wiper to regulate the effective wiping pressure of the felt against the mold face.

The wiper may be applied without machine work of any kind. The felts are easily reversible and renewable.

Kork-O-Tan
REG. U. S. PAT. OFF.
BOTTOM PRESS BLANKETS

QUALITY

Resilient—yet firm
Tough—yet pliable
Oil-resistant
Stretchless
Even Gauge throughout

Low First Cost—Long Life

ECONOMY

BEHR-MANNING *Established 1872* TROY, N. Y.

Why Prefer STAR Parts

TRADE ★ MARK

For Typesetting Machines?

Because continued patronage will insure low prices to machine owners.

Because they are more consistently accurate, SKILLED, direct-ownership supervision, combined with especially-trained mechanical help, insures this fact.

Competition means continued low prices. Maintain it by buying guaranteed STAR parts.

DISTRIBUTORS FOR
Ace Cord-Rubber Guaranteed Belts, Matrix Delivery, Distributor, Assembler, Intermediate Drive, etc.

LINOTYPE PARTS CORPORATION

NEW YORK
203 Lafayette Street

KANSAS CITY
314 West 10th Street

Agencies:

CHICAGO
314 West Randolph Street

LOS ANGELES
1520 Georgia Street

Big Savings on

METAL!

If you were offered A-No. 1 type metal at a substantial discount you would investigate, wouldn't you? There are discounts available to you right in your own plant if you will just stop and investigate. Let the booklet "Metal—A Study in Operating Economy" put you on the track of some real savings.

MONOMELT CO., PE-9
1652 Polk St., N. E.,
Minneapolis, Minn.

Kindly send us your booklet "Metal—A Study in Operating Economy." We are interested in reducing metal costs.

Firm_____

Individual_____

Address_____

New Bench Model

Hacker Block Leveller No. 3

Give Plates A Chance

A good plate may give trouble if badly mounted. Every plate does better if accurately mounted.

A plate cannot be printed unless it is type-high—not about type-high but really type-high within one or two thousandths.

Plates inaccurately mounted must necessarily be subjected to considerable makeready.

Here is a new precision planer of such moderate price as to be within the reach of printers striving to reduce makeready.

Send for catalog.

HACKER MANUFACTURING CO.

320 SOUTH HONORE STREET CHICAGO

Equipment and Technical Literature for Mechanical Executives

Readers of *Printing* EQUIPMENT *Engineer* who are interested, may secure any of the Books, Catalogs or Bulletins listed below by checking the literature desired in the square opposite the title. Mark carefully only that literature which you wish to receive. Fill out the coupon and send it to us. The literature will be forwarded gratis except where noted.

☐ *Temperature Controls*—For metal-melting and casting pots on printing machinery of all kinds. A new control regulates the flame of line-casting machine pot and mouthpiece burners independently. An electric control for electrically-heated line or type-casting machines.

☐ *Slide Rule for Printers*—Four-page folder on slide rule and manual of instructions with respect to copy-fitting, type calculations and prices.

☐ *Bulletin*—Wet and dry recording and controlling instruments for humidity control in lithographing, relief, offset, folding and binding plant. Bulletin No. 188.

☐ *Reason No. 5*—Folder printed in blue and black ink to show uniformity of results which may be obtained with an English Finish Book Paper.

☐ *Rotospray Etching Machine*—Bulletin illustrating and describing equipment for etching zinc and copper plates.

☐ *Automatic Unit*—Four-page folder illustrating and describing a new press, 28 in. by 10½ in., having a speed of 3000 per hour.

☐ *New Cold Metal Feeder*—Four-page illustrated folder describing feeder for application to line-casting machines.

☐ *Don't Forget to Change the Ejector!*—Four-page illustrated folder on the improved means for insuring setting of ejector at time of changing a mold on linotype machines.

Printing Equipment Engineer,
1370 Ontario St., Cleveland, Ohio.

Gentlemen: Please send the literature checked above without obligation.

Name of Company_____

Attention of_____

Position_____ **Dept.**_____

Street Address_____

City_____ **State**_____

Vacations in Cleveland

Henry F. Schwartz, chief machinist in the composing room of the Newark *Sunday Call*, spent his vacation with relatives and friends in Cleveland.

Perry Transferred to Chicago

Transfer of R. R. Perry of the Harris-Seybold-Potter Company, Cleveland, to the Chicago territory is announced by H. A. Porter, Vice President in Charge of Sales.

Mr. Perry has spent several years in the New York territory working under the supervision of J. W. Valiant, vice president. His transfer to Chicago under William Guy Martin, Western District Sales Manager, became effective August 1.

HERE'S A THOUGHT FOR YOU

At the St. Louis A. N. P. A. Mechanical Conference, George Fuller, stereotyping superintendent of the Cleveland *Press*, asked Isador Tornberg of the Wood Newspaper Machinery Corporation whether a stereotype plate base shaving knife should be maintained in an extremely sharp or in a dull condition in order to trim the plate ribs properly. Mr. Tornberg replied by stating that the knife, in addition to shaving the plate to the proper thickness, functions to support the plate and press it upwardly against the shaving machine arch during the shaving operation. If the knife edge is too sharp it will fail in the latter function causing the plate ribs to have a chattered appearance, and the plate will be trimmed inaccurately.

From Mr. Tornberg's statement we gather that after a knife has been ground, the leading edge should be champfered off slightly with a fine stone in order to destroy excessive keenness. The shaving edge of the knife should be constant but must not be excessively sharp in order to function properly.

Our September Advertisers

	Page
AMERICAN PUBLISHERS SUPPLY	29
BEHR-MANNING, KORK-O-TAN	31
BOOTH, E. A., RUBBER COMPANY *Agency:* The H. P. Boynton Advertising Agency, Cleveland, Ohio	21
BURGESS CELLULOSE COMPANY *Agency:* Fred Robbins, Inc., Chicago, Ill.	25
CERTIFIED DRY MAT CORPORATION *Agency:* The H. P. Boynton Advertising Agency, Cleveland, Ohio	20
CHANDLER & PRICE COMPANY *Agency:* Paul Tees, Inc., Cleveland, Ohio	17
EDES MANUFACTURING COMPANY *Agency:* The Callaway Associates, Inc., Boston, Mass.	27
GENERAL ELECTRIC COMPANY	24
GOODYEAR TIRE & RUBBER COMPANY, INC.	4
GOSS PRINTING PRESS COMPANY	Inside Front Cover
HACKER MANUFACTURING COMPANY	32
INTERTYPE CORPORATION *Agency:* Fred Glen Small, Inc., New York, N. Y.	Outside Back Cover
IMPERIAL TYPE METAL COMPANY *Agency:* The H. P. Boynton Advertising Agency, Cleveland, Ohio	22
KLEAN-O-MAT DIVISION, FRED GOAT COMPANY, INC.	28
LINOTYPE PARTS CORPORATION	31
LUDLOW TYPOGRAPH COMPANY	26
MATRIX CONTRAST CORPORATION	5
MERGENTHALER LINOTYPE COMPANY *Agency:* Kenyon & Eckhardt, Inc., New York, N. Y.	15
MONOMELT COMPANY *Agency:* Olmsted Hewitt Agency, Minneapolis, Minn.	32
MORLEY BUTTON MANUFACTURING COMPANY *Agency:* Chambers & Wiswell, Inc., Boston, Mass.	33
REID, WILLIAM & COMPANY	33
ROLLED PLATE METAL COMPANY	23
SKF INDUSTRIES, INC.	19
STAHI NEWSPAPER SUPPLY COMPANY, INC.	33
TIMKEN ROLLER BEARING COMPANY	Inside Back Cover
VANDERCOOK & SONS, INC.	18
WOOD FLONG CORPORATION *Agency:* Meredith & Company, Inc., Troy, N. Y.	30

Accounting For Tone Gradation

W. E. Wines, manager of the A. N. P. A. Mechanical Department, while speaking at the St. Louis Conference last June upon the reason for securing better tone gradation and detail through the use of 75-line screen halftone for newspaper printing, said:

"The difference between 60 and 65 lines to the inch does not seem to be very great as it is only about 8%. Really, however, the comparison should be made, not on the number of lines per lineal inch, but on the number of dots per square inch. As the 60-line screen gives 3,600 dots to the square inch, whereas the 65-line screen gives 4,225, the increase is about 17% in favor of the finer screen. Comparing the 75-line and 60-line screens on this basis, we have 5,625 dots to the square inch as compared with 3,600 or an increase of approximately 56%. That, in my opinion, accounts for the better gradation of tone and greater detail obtained with the finer screen because the fine screen so greatly increases the number of dots to the square inch."

LINOTYPE-INTERTYPE MOTOR PINIONS
Complete Stock for All Motor Drive, Obsolete Drive, etc.
Any Kind of Pinions Made Per Sample
WILLIAM REID & CO.
537 SO. LA SALLE STREET CHICAGO, ILLINOIS

for
FAST
WORK!

When late news is breaking . . . the presses yawning for plates . . . that's when

MORLEY MATS

are worth their weight in platinum! They give deep, clear impressions that produce clean-printing stereos . . . and require only moderate moulding pressure that protects type and cuts; prolongs life of moulding blankets.

Big newspapers . . . little ones, too . . . can do their best work with Morley Mats.

MORLEY BUTTON
Manufacturing Company
PORTSMOUTH, NEW HAMPSHIRE
New York Office: 46 East 11th Street

When Writing to Advertisers Tell Them
You Saw It In
Printing EQUIPMENT *Engineer*

. . Mixing Inks

(Continued from page 13)

delicate tint which is to have no lustre. The gloss white is for a bright tint that is to have a lustre. The magnesia white, or transparent white, is used only for a tint which is to be printed over another darker color. The great advantage of the transparent white is in the fact that the tint produced with it may be applied over the surface of a colored picture, a black "key-plate," or any printed subject as the last color. This is a great advantage in certain varieties of color work; absolute register is assured (as it is a simple matter to keep a tint in close register with a key-plate, or any darker color previously printed), and in many instances the appearance of the finished job is enhanced by the transparent tint being printed as a final operation. The transparent tint softens the tones of the bright colors and adds a sheen to a colored picture which is truly artistic.

GREENS BY TWO-COLOR MIXTURES

Color	*Parts*	
Regular green	1 blue	4 yellow
Bright green	1 deep blue	5 yellow
Dark green	2 blue	1 yellow
Dark green, medium	1 blue	1 yellow
Light green	1 green (reg.)	1 yellow
Emerald green	1 green (reg.)	3 white
Brilliant green	1 green (reg.)	4 yellow
Yellow-green	1 deep blue	70 yellow
Orange-green	1 deep blue	60 chrome
Blue-green	2 deep blue	4 green (reg.)
Sea-green	1 blue	6 green (reg.)
Green-black, dark	1 blue-green	3 black
Green-black, light	5 blue-green	1 black
Olive green	1 blue	4 orange
Olive green, dark	4 yellow	2 black
Olive green, light	4 yellow	1 black
Sage green	4 green-black	6 white
Bronze-green	2 bronze-blue	3 yellow
Japanese green	20 emerald green	1 black
Green tint	2 bright green	40 white
Grass-green	1 bronze-green	1 bright green
Jade green	2 green (reg.)	2 white

In the mixing of the lighter tones of brown, a small portion of lemon yellow can usually be added to advantage. In the darker tones of brown a little touch of orange or chrome-yellow will give a warm, pleasing effect. As to the most suitable reds for mixing browns, a scarlet or crimson will produce the best results in the deeper shades of brown, while a lake-red, or a process red, will work out well in the lighter shades of brown. A beautiful chocolate brown is made with 10 parts vermilion, 3 parts chrome-yellow and 2 parts black. Different tones of rich chocolate brown can be made by changing this formula slightly according to your own ideas. A pleasing shade of maroon can be made with 10 parts scarlet-lake and 4 parts burnt sienna brown. This tone of maroon can be changed to many different lighter and darker tones by adding to it small portions of yellow, orange, chrome-yellow and crimson.

As a general rule, lemon yellow is used in mixing light shades of green while chrome-yellow is used for mixing the darker tones of green. The pressman can often obtain the finest results by mixing a 50-50 combination of lemon yellow and chrome-yellow. A green that may appear too dark or lifeless can be brightened up with a small portion of orange.

A beautiful, warm shade of olive green can be made of 10 parts lemon yellow, 4 parts scarlet and 2 parts blue. Change these proportions to make different tones of olive.

Pleasing shades of gray are always among the most popular tints and colors. The above-mentioned colors can be mixed with opaque white, flat white, flake white or transparent white to suit the occasion. If a gray tint is to be mixed to work over a color or picture which has already been printed, then, of course, the mixing should be done with transparent white. However, if the gray is to be printed on rough cover stock it should be mixed with opaque white. The flat white, of flake white, will do for the average job to be printed on paper. In a case where a solid tint background is to be printed the mixing should be done with transparent white. When using the transparent white, first mix up a small portion of the desired tint with regular mixing white, then add this to the transparent ink to obtain the essential tint.

GRAYS BY TWO-COLOR MIXTURES

Color	*Parts*	
Regular gray	12 white	1 black
Red-gray, light	6 regular gray	1 lake red
Red-gray, dark	10 regular gray	2 lake red
Yellow-gray	8 regular gray	1 yellow
Drab-gray	15 regular gray	1 orange
Green-gray	8 regular gray	1 green
Blue-gray	4 regular gray	1 blue
Purple-gray	8 regular gray	1 purple
Lead-gray	15 regular gray	1 deep blue
Warm gray	12 regular gray	1 vermilion
Dark gray	12 white	2 black
Light gray	20 white	1 black
Shell-pink gray	80 white	1 lake red
Oyster-gray tint	80 white	2 bronze green

First Meeting of Equipment Makers

The first annual meeting of the National Printing Equipment Association, Inc., will be held Wednesday, October 17, at the Palmer House, Chicago. The first session will take place at 11 o'clock in the morning.

Blanket Reduces Makeready

William Fennone, pressroom executive of *La Voce del Popolo*, San Francisco, Calif., has developed an impression cylinder blanket for printing newspaper magazine and color sections on rotary printing presses, which, it is claimed, is a soft packing blanket that automatically resolves into hard packing. It is said that at least 75% of the hard packing can be eliminated by the use of the Fennone blanket and that only 10% to 25% makeready will be needed. No mechanical change is necessary to apply the blanket.

Mr. Fennone exhibited specimen copies of magazine and comic supplements of several papers taken from among the last of long runs. One of these was a supplement which was taken from a run of approximately 565,000 copies.

In construction, the blanket is comprised of paper felt of the proper thickness and of controlled composition suitable for the purpose. The felt is faced with commercial muslin which functions to strengthen and hold together the paper felt. The facing and pulp are bonded with an adhesive which hardens upon drying so that the blanket has the peculiar property of packing down very hard when put under impression, forming a base similar to a hard-sized cardboard. After 25 to 50 impressions, the pressure of the plate against the blanket brings the impression face of the plate down to a hard base.

All newspaper curved printing plate surfaces vary considerably in thickness by several thousandths of an inch from edge to edge, or from corner to corner, which condition may be due to the manner of cooling or trimming the plate or to inequalities in the height of the original type and cuts in the form. These inequalities in the printing surface of the plate are compensated for without makeready by compressing the blanket more or less according to the variations in the plate. After having been compressed during the first 25 to 50 impressions, it is claimed, the blanket will print many thousands of impressions satisfactorily without any further attention to makeready. According to Mr. Fennone, no damage to plates, cylinders or gears can occur during long runs from the strains which might be imposed by extreme underlays or patches.

Due to the construction of the blanket, it is intended that it be removed and discarded and a new one applied after each run.

TIMKEN

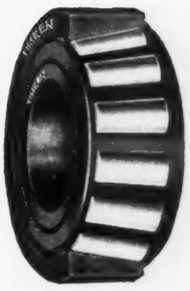
Precision for Your Presses

PRECISION is an important requirement in modern printing equipment. Assuring precision is an important function of Timken Tapered Roller Bearings.

There is no friction nor wear in Timken Bearings. Consequently the accurate relationship of printing press beds, cylinders, automatic feed and delivery mechanism does not change as time goes on.

Press precision is further protected by the ability of Timkens to hold shafts, gears, cylinders, rolls and other moving parts in correct and constant alignment, and to carry all loads—radial, thrust or both together—with a wide margin of safety and without loss of anti-friction efficiency.

The use of Timken Bearings is a major advancement in the printing industry. It will pay you to include their advantages in the press equipment you manufacture or buy.



THE TIMKEN ROLLER BEARING COMPANY, CANTON, OHIO

TIMKEN *Tapered Roller* **BEARINGS**

Intertype Universal Autospacer